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Award Number: **W81XWH-09-1-0161**

TITLE:

**Prostate Cancer Research Training in Health Disparities for Undergraduates (PCaRT)**

PRINCIPAL INVESTIGATOR:

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CONTRACTING ORGANIZATION:

**Meharry Medical College  
Nashville, TN 37208**

REPORT DATE:

**March 2010.**

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**Annual** Summary

**PREPARED FOR: U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012**

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14. ABSTRACT Meharry faculty mentored six enthusiastic Fisk university students by providing training opportunities in ongoing research projects. Four students were related as excellent, one as good, and one as fair. Two of three seniors applied for postgraduate positions. The students reported that the program met its training objectives but one student did not understand the objectives of the research project and one other student expected a lot more supervision than received. Four posters are near completion and will be presented at the next student research day at MMC. We met all for training program aims to: 1). Improve knowledge about PCa epidemiology and ethnic disparity. 2). Enhance familiarization with research methods, and critical review of the literature. 3). Improve understanding of communication networks in the African-American community, and Human subject protection training. 4). Improve laboratory and epidemiological methods and skills.					
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## INTRODUCTION:

*[Narrative that briefly (one paragraph) describes the subject, purpose and scope of the research.]*

The Meharry Medical College (MMC) Prostate Cancer Research Program (PCRP) funded by the Department of Defense utilizes a multidisciplinary approach to address the issue of PCa ethnic disparity. Our research cuts across basic science, translational and clinical areas, addressing issues of barriers to PCa screening, investigating the role of diet and nutrients in PCa risk, and studying biological responses of PCa cells to specific exposures in vitro and within mice models to better understand the role they may play in carcinogenesis. **The program goal** is to stimulate the interest of young scientists so as to empower them to consider an academic career in PCa research by providing summer training opportunities for HBCU undergraduates. This is an efficient strategy for sustaining the next generation of minority PCa researchers who will study PCa disparity. **Program Plan:** Fisk University was established in 1867, a couple of years after the Emancipation Proclamation, to provide a comprehensive and quality undergraduate education open to all, regardless of race, and has continued to meet its mission. Across the street from Fisk University, Meharry Medical College (MMC) has maintained an impressive history of leadership in the education and training of minority physicians, and the provision of health services for minority populations in the United States since 1876. These two institutions with a similar mission and passion to serve the same population of the under privileged, are conveniently located for easy collaboration, being situated on the opposite sides of Dr. D.B. Todd, Jr. Blvd, in Nashville. Creating mentorship relationships at the undergraduate level is a solid foundation for Fisk undergraduates to confidently conceptualize their educational growth in the medical field with a focus on research that will impact the African-American community positively. Given the Meharry-Vanderbilt Alliance since 1999, retention of our NCI Comprehensive Minority Institution/Cancer Center Partnership (U-54) grant since 2000 in partnership with the Vanderbilt-Ingram Cancer Center, and several independently funded investigators at Meharry, we are in a very good position to offer a summer training program for undergraduates. This program will enhance knowledge, research competence and skills, foster positive attitude to biomedical research, stimulate interest in prostate cancer research, develop strong mentorship relationships that are expected to continue beyond this period. The program curriculum included tutorials, seminars, community activities, laboratory experiments, data collection, data management, and development of research reports. **Program aims:** 1). Improve knowledge about the epidemiology of prostate cancer, and the existing ethnic disparity in both incidence and mortality statistics. 2). Enhance familiarization with research methods and the ability to critically evaluate scientific literature in the area of prostate cancer. 3). Improve the understanding of the dynamics of developing, maintaining and sustaining communication networks in the African-American community, and undergo Human subject protection and safety training. 4). Improve laboratory and epidemiological methods and skills particularly related to the research projects of the mentors in this program. **Projects:** 1). A prostate cancer education program and support group at Meharry. “UsTOO Meharry Chapter” 2). Inhibition of Prostate Cancer Growth by Thiazolidinediones. 3). Community-Based Participatory Research: A prostate cancer education program for low-income African-Americans. 4). The role of lycopene (antioxidant) in prostate cancer risk among African-Americans and Africans. The program advisory board is composed of MMC and Fisk faculty and headed by Derrick Beech, M.D., professor and chair of surgery at Meharry.

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**BODY:**

*[This section of the report shall describe the research accomplishments associated with each task outlined in the **approved** Statement Of Work. Data presentation shall be comprehensive in providing a complete record of the research findings for the period of the report. Appended publications and/or presentations **may** be substituted for detailed descriptions but **must** be referenced in the body of the report. If applicable, for each task outlined in the Statement of Work, reference appended publications and/or presentations for details of result findings and tables and/or figures. The report shall include negative as well as positive findings. Include problems in accomplishing any of the tasks. Statistical tests of significance shall be applied to all data whenever possible. Figures and graphs referenced in the text may be embedded in the text or appended. Figures and graphs can also be referenced in the text and appended to a publication. Recommended changes or future work to better address the research topic may also be included, although changes to the original Statement of Work **must** be approved by the Grants Officer. This approval must be obtained prior to initiating any change to the original Statement of Work.]*

**Statement of Work:**

**Task 1:                      Start-Up Phase and Plan Development                      (Month 1 – 4)**

Planning for this summer program started at the beginning of the academic year with discussions with relevant administrators (Vice-President for research at MMC, the Provost at Fisk University, Fisk grant Manager, and Shirley Rainey-Brown (Co-PI).

Selection of Summer Interns:

Program Advertisement: February 2009

- 1 Co-PI informed faculty at Fisk University to encourage their students to apply for and make use of the opportunity using mass email.
- 2 Distributed flyers on Fisk University Campus (See Appendix 1: Program Flyer 1)
- 3 Seminar hosted at Fisk University at which program mentors show-cased their research projects (See Appendix 2: Seminar Flyer 2)
- 4 Seminar presentations: (See Appendix 3: Three Seminar Presentations) organized for the purpose of show-casing mentors' projects.
- 5 PI identified Meharry faculty relevant to this program, met with them individually, and secured their cooperation to participate as speakers in the program tutorials.
- 6 Development and Design of program materials:
  - Application package (Appendix 4)
  - Program evaluation tool (Appendix 5)
  - Student tracking form (Not yet available)

Deliverables: Meetings            2  
                 Seminar                1  
                 Speakers                22  
                 Program related documents    5

**Task 2: Training Primary Mentors**

**(Month 3 – 4)**

In 2007 the PI attended the National Leadership Workshop on Mentoring Women in Biomedical Careers. Theme “Mentoring is Everybody’s Business”. NIH. Bethesda MD. November 27-28, 2007. Program mentors were provided copies of two presentations from this conference to enhance mentoring skills:

- 1 Nature’s guide for mentors
- 2 Mentor’s manual for health sciences training in Uganda.
- 3 Each mentor had access to the Meharry Office of Faculty Development for additional support to update their mentoring skills.

Deliverables: Attendance at a research team mentoring meeting

**Task 3: Development of research apprenticeship program**

**(Month 3 – 5)**

Core course for all trainees:

A core course was developed for this program and experts were invited to deliver presentations to the interns.

-Coursework (Appendix 6)

Training program (Apprenticeship):

Each mentor developed an apprenticeship plan for each of the students they mentored.

Deliverables: Course work and Research apprenticeship  
Program booklet (Appendix 7)

**Task 4: Program Implementation**

**(Month 5 – 24)**

The Summer Program ran for 10 weeks starting from June 1, 2009 – August 6, 2009. The program started off with a one-week PCaRT Short Cancer Course at which students received introductory information in various research related fields from 20 experts. (See course schedule in program booklet page 13). Participants spent the following 9 weeks completing the following training process:

- 1 Literature review
- 2 Critical reading and summarizing of topic related research articles (At least 3)
- 3 Reading and understanding research project aims and objectives, methods, and protocols.
- 4 Conducting research
  - a. Basic science projects (Laboratory experiments)
  - b. Community-based research (Outreach, participant recruitment and consenting)
- 5 Data collection and Data management
- 6 Data analysis and preparation of results
- 7 Preparing reports and/or posters

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After the summer internship: The mentoring relationship was maintained after the summer to varying degrees by each mentor-mentee pair. The Co-PI was contacted as needed to track summer interns during this period.

Deliverables:

- 4 Posters partially completed. (Appendix 8)
- 2 Reports to be completed
- 1 Conference attendance by PI & Co-PI
  - 10<sup>th</sup> Anniversary HBCU/Hispanic Health Services Research Conference, Tuskegee University, Alabama, April 23, 2009.
  - PI presented preliminary data on prostate cancer education program.

**Task 5:                      Report and Presentation of Program Outcome                      (Month 12 – 24)**

The performance of the 6 summer interns was assessed by each mentor during and after the program. A final program manuscript will be developed for presentation at a national conference and the findings will be published. Currently mentors are working hard to keep in contact with their mentees before they graduate. The Co-PI will continue to track the students.

We plan to source for additional funds to continue summer training program for undergraduates. The 2010 DOD PCRP announcement did not include this funding mechanism. We intend to source for other funding pending when this mechanism is announced so as to support the program we have started here at Meharry.

Deliverables: To be accomplished.

- Tracking report of the 6 trainees
- Developing manuscript & Presentations at national and international conferences

**KEY RESEARCH ACCOMPLISHMENTS:**

*[Bulleted list of key research accomplishments emanating from this research.]*

This new program succeeded in meeting its goal of establishing a prostate cancer summer research training for HBCU undergraduates at Meharry Medical College.

1. The prostate cancer summer research program (PCaRT) has been established at Meharry Medical College, and the program has been implemented in its entirety in the summer of 2009.
2. 6 HBCU undergraduates were involved in pilot projects under the mentorship of Meharry faculty in the area of basic, translational and clinical research, and they have submitted course evaluations.
3. Four mentor-mentee research teams are in place in collaboration with investigators from Vanderbilt University, and each mentor has carefully evaluated the performance of their mentee.
4. The program has full access to four research laboratories at Meharry developed by Dr. Stewart, Dr. Ogunkua, Dr. Das, and Dr. Marshall.

5. Pilot Projects:

- a. Project 1: (Danielle Jones): Inhibition of PCa Growth by Histone Deacetylase (HDAC) inhibitors. (Mentor: Stewart L)
- b. Project 2: (Robertino Simpson): 2-amino-1-methyl-6-phenylimidazole[4,5-b]pyridine (PhIP) induced activation of PCa in a mice model. (Mentor: Ogunkua O)
- c. Project 3: (Charlette Goodin): The Role of lycopene in PCa Risk among African-Americans: A Case-Control Study. (Mentor: Fowke J/Ukoli F)

The objective of this study is to evaluate the role of plasma lycopene in prostate cancer risk among African-American men in a case-control design.

- d. Project 4: (Liana Geddes): Overcoming barriers to PCa screening among low-income African-Americans in Nashville. (Mentor: Ukoli F/Adams)

The study objective is to use focus groups to assess the barriers to prostate cancer screening in a low-income African-American community in Nashville. The goal is to improve their level of knowledge about prostate cancer, and positively change their attitude towards early detection of prostate cancer by PSA & DRE screening.

- e. Project 5: (Curtis Field): A prostate cancer education program for low-income African-American men in Nashville. (Mentor: Ukoli/Pasipanodiya).

The study objective is to evaluate a culturally appropriate prostate cancer education program specifically developed for low-income African-American men in Nashville.

- f. Project 6: (Marico Cheeks): The role of meat, fish and eggs in prostate cancer risk among African-American men. (Mentor: Ukoli F)

The study objective is to use statistical methods to evaluate the role of meat, fish, seafood, dairy and eggs in prostate cancer risk among African-American men in a case-control design.

**REPORTABLE OUTCOMES:**

*[Provide a list of reportable outcomes that have resulted from this research to include:]*

1. Laboratory research:
  - i) One completed research project with results
  - ii) One partially completed research project
2. Community-Based Participatory Research
  - i) Two completed projects with results
  - ii) Two sub projects only partially completed



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## **CHALLENGES:**

### **Selection of Summer Interns:**

It was difficult to get an impressive attendance at the seminar organized at Fisk University in the month of February, attributed to students' unavailability as they were preparing for course examinations. Once a month meeting with students post-summer has not been regular as students claim time constraint, which is outside the PI's control. The students were invited to interview of these internship positions based on their application statement of interest in a biomedical research career pathway. It may be necessary to investigate other methods of assessing their interest.

### **Report Preparation:**

Unlike laboratory research, community-based projects take much longer to implement and data management is also more complex. Students were therefore not able to complete the process of data analysis and interpretation. They were therefore expected to focus more on the following areas: Introduction, Aims & Objectives, and Materials and Methods. Only preliminary results were expected from the students.

## **CONCLUSIONS:**

*[Summarize the results to include the Importance and/or implications of the completed research and when necessary, recommend changes on future work to better address the problem. A "so what section" which evaluates the knowledge as a scientific or medical product shall also be included in the conclusion of the report. ]*

This training program requires at least one renewal to achieve its goal at the level anticipated. It will be highly encouraging if the Department of Defense will consider requesting application for grant renewal for another two-year period to maintain the momentum that is building up with the Fisk University undergraduates. This program has successfully stimulated the interest of six minority undergraduates in the area of prostate cancer disparity research, and it is hoped that at least two of them will go on to a doctoral or master level program. The enthusiasm of program mentors will need to be supported by new funding by either supplemental funds or grant renewal.

REFERENCES: *[List all references pertinent to the report using a standard journal format (i.e. format used in Science, Military Medicine, etc.).]*

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APPENDIX:

Appendix 1: Program Flyer 1

Appendix 2: Program Seminar Flyer 2

Appendix 3: Seminar presentations by 6 mentors (3 PowerPoints included)

Appendix 4: Application package for the program

Appendix 5: Evaluation form

Appendix 6: Coursework

Appendix 7: Program Booklet

Appendix 8: Posters by summer interns



# 2009 Summer Research Training Program

for  
Fisk University Undergraduates



## Summer Experience in Cancer Health Disparities Research at Meharry Basic Science, Translational & Clinical Research

**Purpose:** To provide prostate cancer research experience for highly qualified HBCU undergraduates who are considering graduate school and careers in biomedical research.

**Description:** Students will work full-time in laboratories or communities on projects of mutual interest, attend didactic lectures from experts, attend seminars on related and special topics, present written and oral reports on their work, and receive independent study credit.

**Duration:** Starts June 1, 2009 – August 7, 2009 (10 weeks)

<b>Eligibility:</b>	Applicants must be U.S. citizens, permanent residents, or legal aliens, who have completed at least one years of undergraduate education at Fisk University by summer 2009. Selection will be based on academic record, recommendations from professors and academic advisers, and future career goals. The goal of this program is to encourage and prepare highly qualified undergraduates from an HBCU to attend graduate school and pursue a career in cancer research, particularly prostate cancer disparity research.	
<b>Financial:</b>	Successful applicants will receive a stipend of \$1,500/month with benefits.	
<b>Application Package:</b>	<ol style="list-style-type: none"> <li>1. 2009 Summer Training Program application form (Available at Dr. Shirley Rainey's Office)</li> <li>2. Letter of recommendation from a Fisk University professor or academic adviser</li> <li>3. Letter of recommendation from a community member (church, volunteer center etc.)</li> <li>4. A written personal statement</li> <li>5. Official transcript(s) of undergraduate grades</li> </ol>	
<b>Return to:</b>	Dr. Shirley Rainey, Dept. of Sociology, Park Johnson Building, Room 311 Fisk University, 1000 7 <sup>th</sup> Ave. North, Nashville, TN 37208	
<b>Deadline:</b>	<b><u>By 4:00pm., Friday March 27, 2009.</u></b>	
<b>Notification:</b>	On or before April 30, 2009.	
<b>Information:</b>	Contact: Shirley Rainey, Ph.D. Department of Sociology Fisk University 1000 7 <sup>th</sup> Ave. North, Nashville TN 37208 Tel. 615-329-8756 Email: <a href="mailto:srainey@fisk.edu">srainey@fisk.edu</a>	Contact: Flora A. M. Ukoli, MD, MPH. Department of Surgery Meharry Medical College 1005 Dr. D. B. Todd, Jr. Blvd. Nashville TN 37208 Tel: 615-327-6565 Email: <a href="mailto:fukoli@mmc.edu">fukoli@mmc.edu</a>



***MEHARRY MEDICAL COLLEGE AND FISK UNIVERSITY***

**INVITES YOU TO A**

**Research Training in Prostate Cancer  
Health Disparities Seminar  
(PCaRT) for Undergraduates**

**Friday, February 27, 2009**

**12:00-1:30 P.M.**

**Appleton Room**

*The seminar is to provide Fisk's undergraduate students with valuable information about the 2009 Summer Prostate Cancer Research Training Program. Participants will be provided a stipend for participating in the research project.*

***“COME LEARN MORE ABOUT THIS GREAT OPPORTUNITY”***



The background of the slide is a photograph of the Meharry Medical College entrance. It features a large stone archway set into a red brick wall. The archway is inscribed with 'MEHARRY MEDICAL COLLEGE' in a semi-circle. In the center of the arch is a circular logo depicting a classical building with a central arched doorway and columns. Below the logo, the year '1876' is inscribed. Two green bushes are visible at the bottom of the frame.

# Department of Defense HBCU Summer Research Training Program

*Flora A. M. Ukoli, MD., MPH.*

*(PI: Meharry Medical College)*

*Shirley Rainey, Ph.D.*

*(Co-PI: Fisk University)*

# The Program Goal

- Stimulate interest & empower young scientists to consider a career in biomedical research
  - The next generation of minority researchers
- Purpose of biomedical research
  - Cause, Diagnosis, Treatment, Prevention and Control of disease
- Program Focus: Cancer Health Disparities
  - Eliminate the disproportionate cancer burden borne by African-Americans

# Program Strategy

- Select 5 Fisk students
  - Expected to receive hands-on experience within existing research projects
  - Developed by the program mentors
- Encouraged to develop a pilot project
  - Can be considered for
    - Selection in the second year of the program
    - Doctoral thesis in the future

# Program Aims

- Improve knowledge
  - Prostate carcinogenesis
  - Epidemiology of prostate cancer
    - Existing ethnic disparity in incidence & mortality
- Enhance familiarization with research literature
  - Ability to critically evaluate scientific literature
- Improve research skills
  - Laboratory methods & techniques
    - Conducting experiments
  - Epidemiological methods
    - Community networking, Participant recruitment
    - Human subject protection and safety
    - Data collection and management



# Program Mentors

**Carlton Adams, M.D.**

**LaMonica Stewart, Ph.D.**

**Ben Ogunkua, M.D., Ph.D.**

**Alphonse Pasipanodya, M.D.**

**Jay Fowke, Ph.D., MPH.**

**Flora Ukoli, MD, MPH.**

# Dietary Determinants of Prostate Cancer Risk in Black Populations



Flora A. M. Ukoli, MD., MPH.

Primary Mentor & PI

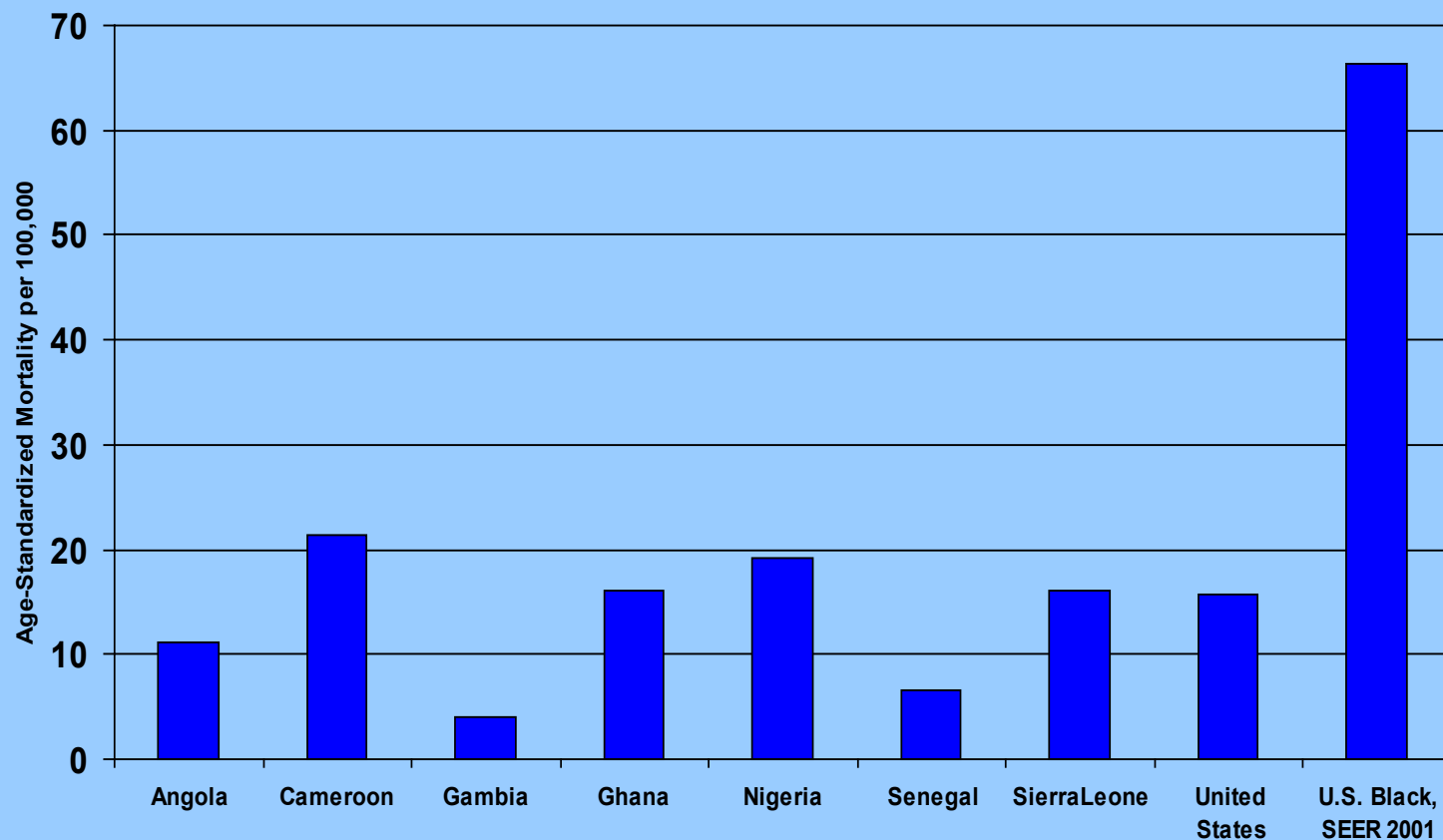
Other Investigators

Jay Fowke, Ph.D., MPH.

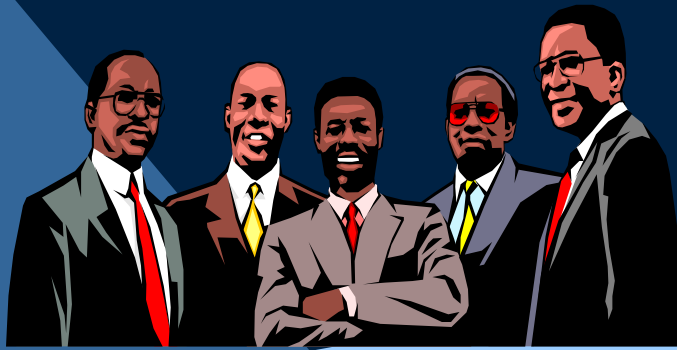
Rodney Davis, MD.

Derrick Beech, MD.

# Age –Standardized Mortality Rates for Prostate Cancer



Source: Ferlay J, Bray F, Pisani P, et al. GLOBOCAN 2002: cancer Incidence, Mortality and Prevalence Worldwide. IARC Cancerbase No. 5, version 2.0, IARC Press, Lyon, 2004.



Why do African-American men have the highest prostate cancer incidence and mortality in the world? Is this because of genetic susceptibility or environmental exposures? Can we find an answer by comparing African-Americans and Africans who share similar genes but diverse cultural exposures?

Study Design: Case-Control Study

Study Sites: Nashville & Nigeria

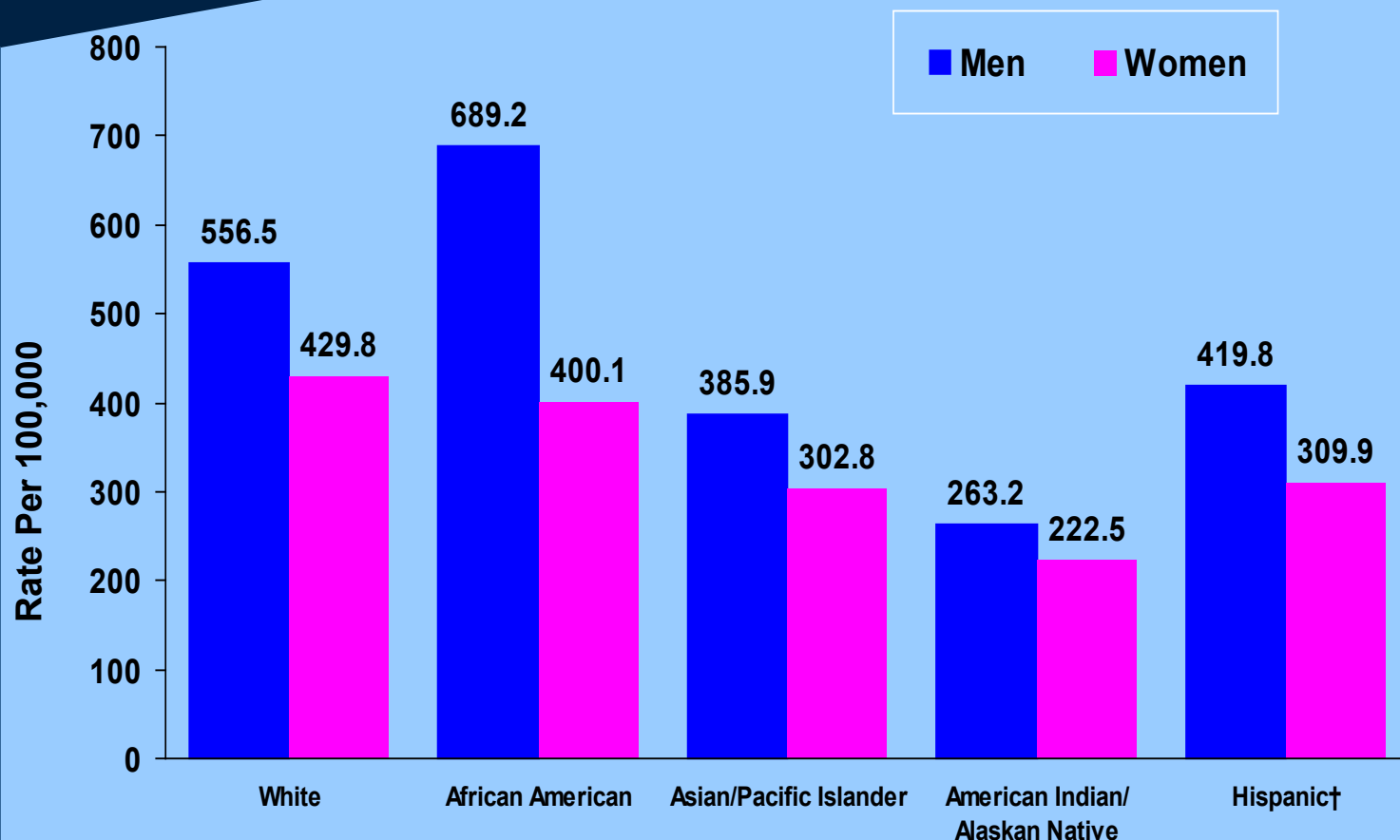
Funded by the Department of Defense

# Environmental Risk Factors of Prostate Cancer

- It is estimated that 90% of all prostate cancer is due to environmental rather than genetic factors.
- The high disparity in prostate cancer incidence between African-Americans and Africans may be related to diet.
- Reports from research studies:
  - Suspected risk factors:
    - DIETARY FAT
    - Saturated Fat, Omega-6 Fatty acids
  - Suspected protective factors
    - Omega-6 fatty acids, antioxidants like lycopene

# Cancer Incidence Rates\* by Race & Ethnicity

1997-2001



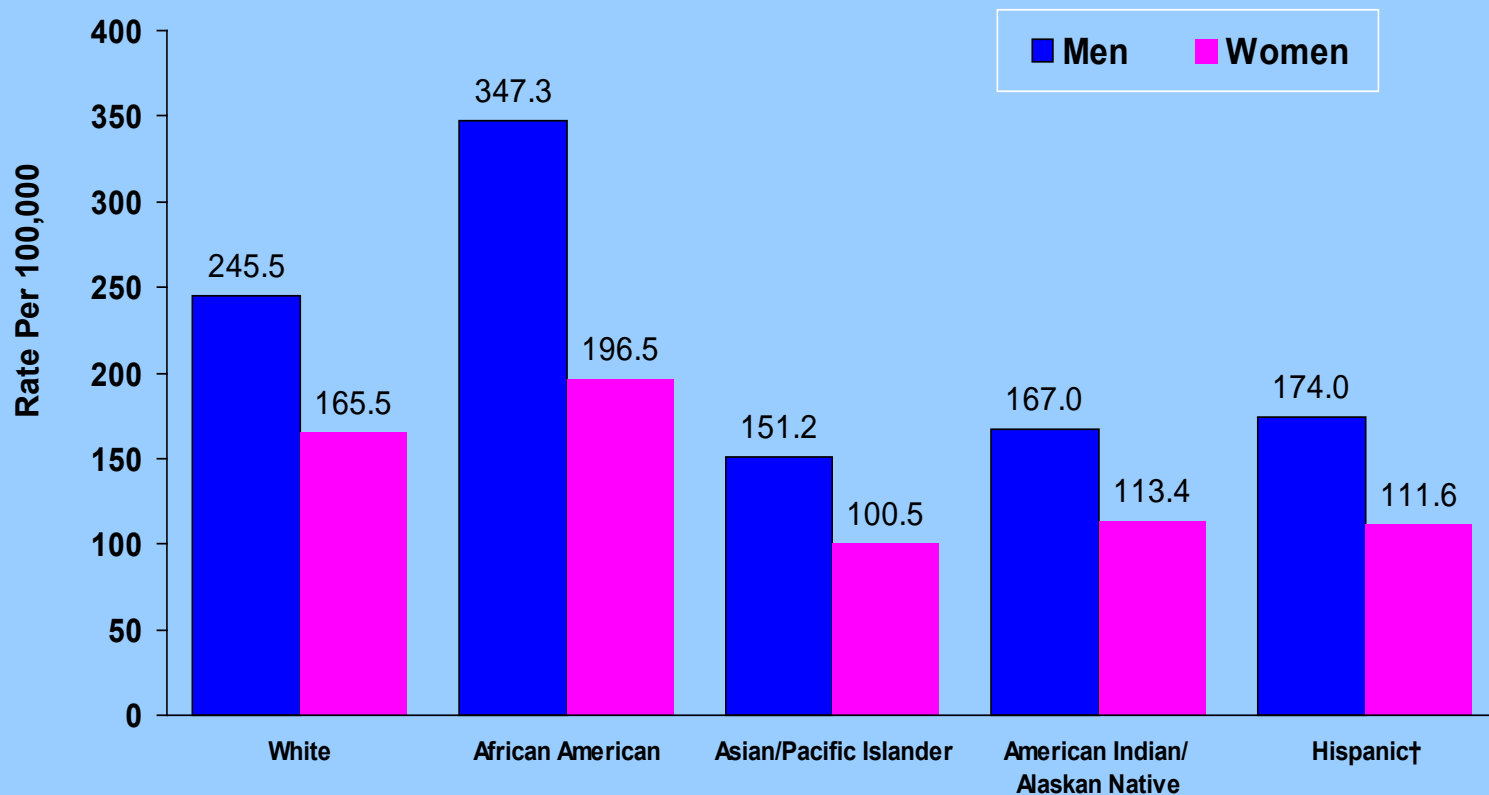
\*Per 100,000 Age-adjusted to the 2000 US standard population.

†Hispanic is not mutually exclusive from others.

Source: Surveillance, Epidemiology, and End Results Program, 1975-2001, Division of Cancer Control and Population Sciences, National Cancer Institute, 2004.

# Cancer Death Rates\*, by Race & Ethnicity.

1997-2001



\*Per 100,000, age-adjusted to the 2000 US standard population.

† Hispanic is not mutually exclusive from others.

Source: Surveillance, Epidemiology, and End Results Program, 1975-2001, Division of Cancer Control and Population Sciences, National Cancer Institute, 2004.

# Research Goal

- To investigate dietary explanations for the disparity in prostate cancer incidence between African-Americans and Nigerians

&

- Suggest dietary modifications that may prevent or inhibit prostate carcinogenesis

Funded by the Department of Defense



# The Role of Summer Student

- Assist in recruiting study participants
  - Outreach: Nashville community
  - Outreach: Selected urology and family practice clinics
  - Telephone recruitment
- Consent & Interview study participants
- Enter data into the database
- Determine the role of specific nutrients in prostate cancer risk using statistical techniques
- Develop a study poster

Already recruited 200 cases and 400 controls

Questions?

# GENERAL PRINCIPLES of CANCER DIAGNOSIS and MANAGEMENT

Carlton Adams Jr. M.D.

# MULTIDISCIPLINARY APPROACH

- Prevention
  - Education
  - Lifestyle changes
  - Testing
- Diagnosis
- Tumor reduction
- Surveillance
- Research
- Community advocacy
- Primary care providers
- Interventionists
- Oncologists
  - Medical
  - Surgical
  - Radiation
- Primary care providers
- Community advocates

# Community advocacy

- Pastors, businessmen, mothers, fathers children
- Local professionals, businesses
- Health agencies
- Celebrities
- Public policy officials



- What would you want done if you knew that there was a colon cancer gene in your family which produced colon cancer by the age of 40?

1. FAMILIAL POLYPOSIS (chromosome 5q21.)
2. DNA mismatch repair genes (*MSH2*, *MLH1*, *PMS1*, *PMS2*, and *MSH6*)
3. BRCA 1,2 (breast, prostate, ovarian)

Cancer diagnosis is principally  
centered around consensus  
screening and testing guidelines

# SCREENING

- Testing for risk & active disease
- GOALS:
  - Higher cure rates
  - Longevity
- EXAMPLES
  - Digital rectal exam (DRE)
  - Stool blood testing (occult blood)
  - Mammograms/ self –breast exams



# DIAGNOSIS

- PROVIDER EXAMS
- RADIOLOGIC TESTS
- INTERVENTIONAL PROCEDURES
- PATHOLOGIC REVIEW
  - Serologic
  - Tissue
- GENETIC ANALYSIS
  - DNA activity
  - Gene products & regulation

THE MANAGEMENT OF CANCER  
INVOLVES INTERACTIVE  
APPROACHES of:

RESECTIVE,  
CYTOREDUCTIVE &  
PROPHYLACTIC THERAPIES

# RESECTION

- SURGERY
- INTERVENTIONAL



# CYTOREDUCTION

- SURGERY
- CHEMOTHERAPY
- RADIATION
- RADIOFREQUENCY

# PROPHYLACTIC

- NUTRITIONAL
- BEHAVIORAL
- SURGERY
- INTERVENTIONAL
- SURVEILLANCE

Progress in Cancer  
Management continues to be  
driven by Socio-Behavioral,  
Scientific, & Clinical Research  
advances



Each element contributes  
significantly to the  
improvements in cancer care  
worldwide

# A Prostate Cancer Screening Program for Low-Income African-Americans

Alphonse Pasipanodya, MD.  
(Primary Mentor)

Flora A. M. Ukoli, MD., MPH.  
(Principal Investigator)

## Investigators

Kushal Patel, Ph.D.  
Katina Beard, M.S.

Derrick Beech, M.D.  
(Co-PI)

Rodney Davis, M.D.  
(Consultant)



# Collaborative Partnership

**Meharry Medical College  
(1876)**

**&**

**Mathew Walker Comprehensive Health Center  
(1968)**



# Prostate Cancer Statistics

- Most commonly diagnosed cancer
- Second leading cancer deaths
- African-Americans:
  - Highest incidence rate in the world
    - 23% higher than whites
  - Higher mortality than whites
  - Reasons for this poor statistics include
    - Late presentation
      - Limited access to health care
      - Low prostate cancer screening rate
    - Possible biological basis
      - Gene-Environment susceptibility or disease variant

# Study Goal & Objectives

- Goal

Improve prostate cancer screening rate among low-income African-Americans

By:

Improving knowledge and attitude of African-American men towards early detection of prostate cancer

- Main Objectives:

- 1) Develop a culturally appropriate prostate cancer education intervention
- 2) Evaluate the effectiveness of the intervention

# PROGRAM PLAN

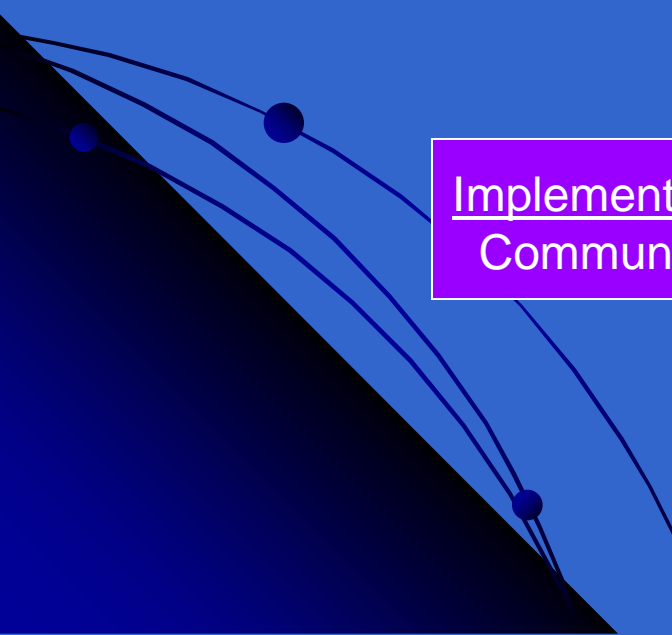
Health Issues Assessment  
Three 10-Person Focus Groups

Summarized Discussions

Developed Intervention  
Community Advisory Board

Implementing Intervention  
Community Navigators

Evaluate Intervention



# Education Intervention

- Study population

520 African-American men: 45 years and older

260 from MWCHC

260 from the Community

- Educators:

Community navigators: Lay African-American men trained for this project

- Education Intervention:

- Brochure has been developed for the purpose and is presented to the participants by the community navigator.

# Study Flyer: Intervention

## Prostate Cancer Education Program



## African-American Men 45 years and Older

Help us understand and improve the health of men in your community by completing a survey before and after receiving educational information.



**\$45.00**  
*Cash compensation*

*For more information call  
615-327-5982*

*Meharry Medical College  
&*

*Matthew Walker Comprehensive Health Center*



Sponsored by: Center for Medicare & Medicaid Services, DEPARTMENT OF HEALTH & HUMAN SERVICES

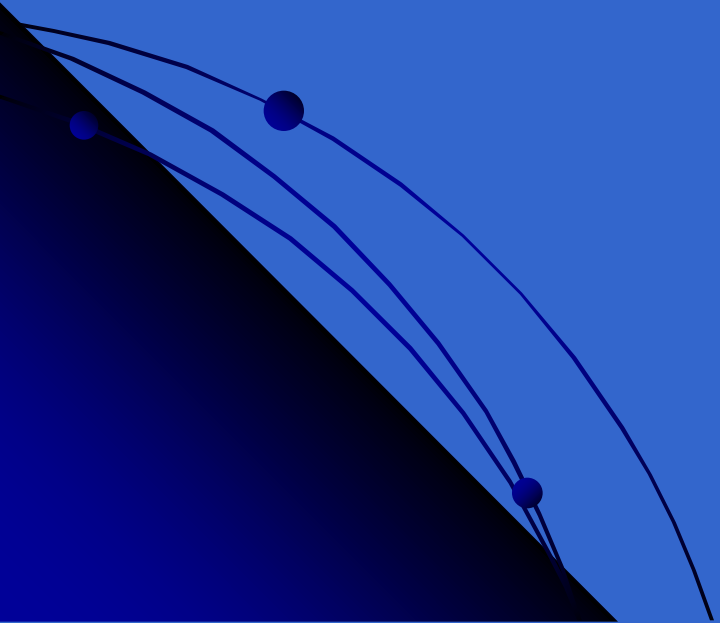
# The Role of Summer Student

- Assist the navigators to recruit participants
- Interview and educate participants
- Enter data collected into the database
- Evaluate the program by assessing
  - Prostate cancer knowledge improvement before and after intervention
  - Proportion of men who changed their attitude or tested for prostate cancer

The study has already recruited 300 men



# Questions Please





School of Medicine  
Department of Surgery

**Prostate Cancer Research Training in Health Disparities for HBCU Undergraduates  
(PCaRT Program)**

**2009 APPLICATION FORM  
Due: 15<sup>th</sup> of February, 2009.**

**Instructions:** Complete the application to the best of your ability as incomplete applications will **not** be considered. Type or print in blue or black ink. The recommendation letters should be inside sealed envelopes. Staple the essays, transcript, and envelopes to the signed application form.

Last Name _____		First Name _____		Middle Name _____		Sex	<input type="radio"/> Male	<input type="radio"/> Female
SS # _____ - _____ - _____		DOB _____ / _____ / _____						
		MM DD YY						
Class Standing		<input type="radio"/> Fr	<input type="radio"/> So	<input type="radio"/> Jr	<input type="radio"/> Sr	Major Advisor _____		Phone # _____
Major: _____		GPA _____		Expected Graduation Date _____ / _____ / _____		Degree _____		

Current Mailing Address & Phone		Permanent Address & Phone (Parent / Guardian)	
Number/Street _____		Number/Street _____	
City/State/Zip _____		City/State/Zip _____	
Current Phone # ( _____ ) _____ - _____		Current Phone # ( _____ ) _____ - _____	
School Email Address: _____		Parent Email Address: _____	
Personal Email Address: _____		Parent Name: _____	

High School Attended	Address	City	State	Zip
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**List Science related Courses that you have taken or that you are currently taking?**

_____	_____	_____
_____	_____	_____

List extracurricular activities and special talents (include school, community, health, and/or church related):

1) _____	3) _____	5) _____
2) _____	4) _____	6) _____

Are you: U.S. Citizen ☐ Permanent Resident ☐ Legal Alien ☐ Visa # \_\_\_\_\_

### Self-Identification

African-American/Black ☐ White ☐ Others ☐ specify \_\_\_\_\_

What health career are you planning to pursue? (Summary)

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Check if you have ever been immunized for: Tuberculosis (TB) \_\_\_\_\_ If so, when \_\_\_\_\_

Hepatitis \_\_\_\_\_ If so, when \_\_\_\_\_

Provide your health insurance information:

---

Provider	Policy	#	Telephone#
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Emergency Contact	Name	Phone#	Relation to You
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Signature \_\_\_\_\_

Date \_\_\_\_\_

### APPLICATION SUBMISSION

Important: Because of the large number of applicants, if all of the following does not accompany your completed application, you will **not** be considered for placement in this program.

1. One letter of recommendation – Letter can be from a Fisk University faculty.  
– Letter **must** be received in a sealed envelope.
2. Personal Statement (1-2 pages) about your long term goals and why you think you deserve this award.  
– Typed in 12 font, single-spaced.
3. Official copy of your most recent transcript
4. One letter of recommendation from a community leader

### Return or mail completed application packet to:

Dr. Shirley Rainey, Department of Sociology, Park Johnson Building, Room 311, Fisk University, 1000 7<sup>th</sup> Ave. North, Nashville, TN 37208 Office (615)329-8756 E-Mail: [srainey@fisk.edu](mailto:srainey@fisk.edu)

**For additional information or questions:** Contact Dr. Flora A. M. Ukoli, Program PI at [fukoli@mmc.edu](mailto:fukoli@mmc.edu)

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1005 Dr. D. B. Todd, Jr., Blvd.  
Nashville, TN 37208-3599  
Phone: (615) 327-6342 Fax: (615) 327-5579

# PROGRAM EVALUATION FORM

## The Prostate Cancer Research Training (PCaRT) Program

Summer Internship Year: \_\_\_\_\_

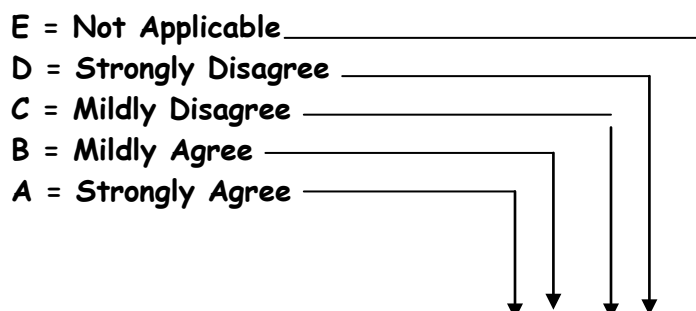
Course: Prostate Cancer Research Training

Mentor: \_\_\_\_\_

Research Project: \_\_\_\_\_

This questionnaire provides you with the opportunity to evaluate your cancer research training experience as a Summer Intern at Meharry. The results will be used to provide a basis for program improvement and overall effectiveness. Your invitation to a 2<sup>nd</sup> year of the program will depend on your performance during the summer internship period and your continuing interest in your project after the summer, and will not be based on your response on this form. ....*Thank You!!*

SECTION I: Items **A-C** should be answered according to the following scale:



### Section A - Organization

	A	B	C	D	E
1. Learning objectives were clearly stated.					
2. The syllabus/tasks were organized and clear.					
3. Grading policy explained					
4. Time allocated adequately covered the content/tasks appropriate.					

### Section B - Content

	A	B	C	D	E
5. The application of principles and concepts to problem solving was emphasized.					
6. The experience provided familiarization with the research topic area.					
7. The experience provided professional insight into the research methods/techniques.					
8. The program content was appropriate for the current level of student knowledge.					
9. Hand out and other materials were up to date					

### Section C - Evaluation

	A	B	C	D	E
10. Adequate discussion sessions were scheduled during the orientation week.					
11. Discussion sessions with the mentor were adequate.					
12. Feedback on my performance was provided in reasonable time.					

# PROGRAM EVALUATION FORM

## The Prostate Cancer Research Training (PCaRT) Program

SECTION 2: Items **D-H** should be answered according to the following scale:

**E = Not Applicable**

**D = Strongly Disagree**

**C = Mildly Disagree**

**B = Mildly Agree**

**A = Strongly Agree**

### D. Organizational Structure

1. The mentor attended all research activities	A	B	C	D	E
2. Materials presented by Guest Speakers addressed stated learning objectives.	A	B	C	D	E
3. Research activities began and ended on time.	A	B	C	D	E

### E. Instructor-Student Interaction or Rapport

4. My mentor had office hours for consultations.	A	B	C	D	E
5. My mentor encouraged discussions and was open to my opinions.	A	B	C	D	E
6. I was given opportunities to ask questions.	A	B	C	D	E
7. My mentor actively helped me when I had difficulty.	A	B	C	D	E
8. My mentor responded to my concerns effectively.	A	B	C	D	E

### F. Teaching Skill, Communication Ability

9. My mentor used language that was comprehensible and spoke clearly.	A	B	C	D	E
10. Overheads/Slides were readable and comprehensive.	A	B	C	D	E
11. My mentor actively engaged me in a learning process.	A	B	C	D	E
12. My mentor used examples or illustrations to clarify reading materials.	A	B	C	D	E
13. My mentor's presentations/discussions were almost always focused.	A	B	C	D	E
14. My mentor summarized or emphasized major points.	A	B	C	D	E

### G. Workload, Program Difficulty & Evaluation

15. My mentor tried to cover too much material.	A	B	C	D	E
16. I needed help to understand most of the materials.	A	B	C	D	E
17. More time should have been allocated to this section / course.	A	B	C	D	E
18. The reading assignments were reasonably easy to understand.	A	B	C	D	E
19. My mentor expectations on the students were reasonable.	A	B	C	D	E
20. My mentor explained to me how I would be evaluated.	A	B	C	D	E

### H. Impact on Students

21. My mentor enhanced my knowledge in Biomedical / Epidemiology / Health science research.	A	B	C	D	E
22. My interest in research increased as a result of this program experience.	A	B	C	D	E
23. I learned useful career enhancing skills in this program.	A	B	C	D	E

# PROGRAM EVALUATION FORM

## The Prostate Cancer Research Training (PCaRT) Program

### Section 3: Open Remark/Suggestions.

Your comment on strengths, weaknesses you have observed and suggestions for improvements with regard to the following will be appreciated:

	<b>Strengths</b>	<b>Weaknesses</b>	<b>Suggested Improvement</b>
Mentor 1 At Meharry			
Mentor 2 At Meharry			
Fisk University Mentor			
Research Activities			
Research Reports			
Others			
In a grade of <b>A</b> (Excellent); <b>B</b> (Very good); <b>C</b> (Good); <b>D</b> (Fair); <b>E</b> (Poor), what grade would you give to this Summer Research Internship? _____			



Principal Investigator: Flora A. M. Ukoli

**Collaborative Undergraduate HBCU Student Summer Training Program Award**

Prostate Cancer Research Training in Health Disparities for HBCU Undergraduates  
(PCaRT Program)

Program Development Plan:

1	Announce	ment Flyer	Draft
2	Application	Form	Draft
3	Course Work	Draft	
4	Course	schedule	Draft

**Summer Course: Prostate Cancer Disparity Research**

(1 Credit Load)

**Required Coursework**

This summer training program will include a core didactic scientifically sound curriculum designed at the undergraduate level to provide essential knowledge and skills needed to conceptualize research ideas, develop research hypotheses, select an appropriate method, statistical analysis, the fundamentals of data interpretation and presentation of results. The curriculum integrates selected topics from the MSPH, the Meharry Doctor of Science, and the Health Disparities/Culture and Health programs.

Introduction to Epidemiology	3	hours
Prostate Cancer Epidemiology	3	hours
Clinical Research Methods	3	hours
Cancer Biology: Biology of prostate cancer		3 hours
Genes associated with prostate cancer risk		3 hours
Health Disparities: Culture and Health		3 hours
Research Ethics	3	hours
Grant Writing	2	hour
Environmental Health	2	hours
Behavioral Methods	2	hours
Biostatistics: Data Analysis (Hands-On)	3	hours
Total		30 hours

**Description of units within the course:**

*Introduction to Epidemiology:* Introduction to the basic concepts of epidemiology as the study of the distribution and determinants of disease in human populations. The historical roots and uses of epidemiology and the evolution of its methods will be described. The course will also focus on the application of the principles and tools of epidemiology in the decision-making process in the evaluation and planning of health programs. Three major subject areas are included – descriptive epidemiology and the calculation of rates, methods used in analyzing disease outbreaks, and methods of analytical epidemiology (case-control studies, cohort studies and clinical trials).

*Prostate Cancer Epidemiology:* Describe the trend in the incidence and mortality of prostate cancer in different parts of the world, with focus on the pattern for African-American population. Discuss environmental and genetic risk factors for prostate cancer.

*Clinical Research Methodology:* Introduction to a variety of research methods, especially the logic of research design and procedure, data analysis, and the reporting of research, both in theory and practice. Course objectives include discussion and application of principles, practices and methods associated with defining the research question, defining hypotheses, research design, sampling techniques, data collection, data analysis and data interpretations. All trainees will be required to present and critique an instructor-approved journal article that demonstrates research methodology as discussed in the course. Trainee's original research proposals will be reviewed, discussed and revised.

*Cancer Biology:* Biology of prostate cancer:  
To be developed.

*Genes associated with prostate cancer risk:*  
To be developed.

*Health Disparities:* A brief review of the complex subject of health disparities with a special emphasis on disparities in the incidence, prevalence, evaluation, treatment, control, and health outcomes of prostate cancer will be discussed. The strengths and limitations of current methodologies for evaluating health disparities will be discussed, introducing the national surveys and data collection systems available at the CDC to support epidemiological and public health research in chronic disease disparities. Current strategies designed to help eliminate health disparities in general will be addressed. The hypothesis-driven approach and a methodology-based approach will be described.

*Culture and Health: An Ethnographic and Qualitative Approach:* Briefly examine the roles of race and racism as powerful cultural constructs and ethnicity as a part of cultural identity in shaping individual and community health chances and choices at multiple levels. Emphasis will be placed on analysis of broader systems of culture, socioeconomic structures and psychological conditions that contribute to poverty and lack of health access.

*Research Ethics:* Introduction to the development of federal guidelines and regulations to protect human subjects who participate in research, including the historical perspectives of human subject protection.

- 1) Human subject protection and safety training (Online).
- 2) The IRB application process, Consent forms, HIPAA forms.
- 3) Regulations to protect research animals.

*Grant Writing:* Funding agencies, Pre-doctoral grant application process (announcements and application instructions). Describe application process of various agencies such as DOD, NIH, ACS, Others.

*Environmental Health:* Introduction to environmental health from local to global perspectives and addressing environmental health issues that may be associated with prostate cancer. The overlap between environment and diet, toxicology, exposure assessment, risk assessment/risk management, air pollution, water pollution, and the built environment/urban sprawl will be discussed.

*Health Education & Health Education (Behavioral Methods):* Describe and demonstrate the use of a basic framework for systematically applying the behavioral and social sciences to address public health problems such as prostate cancer in the African-American population. Emphasis is placed on the delineation of risk behavior, their determinants, and the design and implementation of appropriately targeted health promotion and education interventions that are likely to impact critical health behaviors and health status.

**Course Schedule: Week 1 – Week 12**

Week	Day	8-10:00am	10-12:00nn	Lunch	1 – 2:00 pm	2 – 5:00 pm	
1	Monday	Orientation	Epi		Epi	Orientation	
	Tuesday	Stewart Project	Ca Biology		Ca Biology	Library	
	Wednesday	Adam Project	Ethics		Ethics	Ukoli Project	
	Thursday	Ogunkua Proj.	Behavior M		Biostatistics	HIV Center	
	Friday	Primary Project	Env. Hlth		Grant Writing	Women Center	
	Saturday	Community Outreach (All)					
Week	Day	8-10:00am	10-12:00nn	Lunch	1-2:00pm	2 – 5:00pm	
2	Monday	Primary Project	PCa Epi		PCa Epi	Primary Project	
	Tuesday	Stewart Project	PCa Genes		PCa Genes	Primary Project	
	Wednesday	Ukoli Project	Methods		Methods	Ogunkua Project	
	Thursday	Adam Project	Hlth Disparity		Hlth Disparity	Primary Project	
	Friday	Primary Project	Biostatistics		Grant Writing	Primary Project	
	Saturday						
	Sunday	Community Outreach (All)					
Week	Day	8-10:00am	10-12:00nn	Lunch	1-2:00pm	3 – 5:00pm	
3 & 11	Monday	Primary Project			Primary Project		
	Tuesday	Primary Project			Primary Project		
	Wednesday	Primary Project		Community Outreach (Optional)		Primary Project	
	Thursday	Primary Project		Seminar		Primary Project	
	Friday	Guest Speaker		Community Outreach (Optional)			
	Saturday	Community Outreach (Scheduled/Optional)					
Week	Day	8-10:00am	10-12:00nn	Lunch	1-2:00pm	3 – 5:00pm	
12	Monday	Primary Project			Primary Project		
	Tuesday	Primary Project			Primary Project		
	Wednesday	Primary Project			Primary Project		
	Thursday	Presentations		Presentations	Presentations		
	Friday						Award Dinner

Week 1 & 2: Group Orientation: General & Projects  
Daily Tutorials from 10:00am 200pm.

Week 3 – 11: Weekly Guest Speaker  
Weekly Seminar  
Project work with Primary mentor

Week 12: Round-up, Complete Reports, Presentations, Award Dinner



Meharry Medical College  
Department of Surgery



Prostate Cancer Research Training Program  
(PCaRT)

**Summer Experience in Cancer Health Disparities Research**  
Basic Science, Translational, Clinical Research

*Mission*  
*To Eliminate Prostate Cancer Health Disparities*

A collaborative partnership between Meharry Medical College and Fisk University



**Monday, June 1, 2009  
Room M202  
West Basic Science Building**

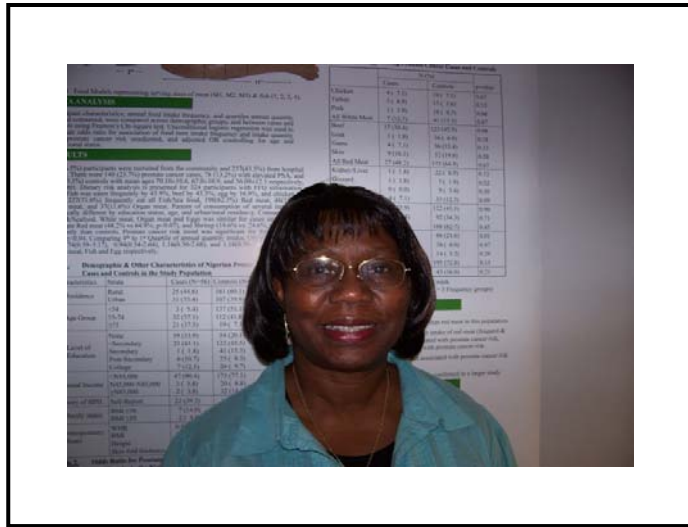
*Searching for the determinants of disease requires that we  
research in the laboratory as well as in the community.*

*If knocking on each door is what it will take to win the trust of the people we  
serve, then that is what we shall do. If they accept our greetings and provide  
the information we seek then we are one step closer to finding solutions that  
will eliminate the health disparities that plague our people.*

## **Flora Aroma Ukoli, MBBS.,DPH.,MPH.**

### **Principal Investigator**

Dr. Flora Ukoli received her medical degree at the University of Ibadan, Nigeria (1975), a Master's degree in public health from the University of Glasgow, Scotland (1980), and a master's degree in epidemiology from the University of Pittsburgh, PA (1998). A Fellow of the West African College of Physicians and Professor of Community Medicine, she joined the Department of Surgery at Meharry Medical College in 2003 as research faculty, with joint appointment in the School of Graduate Studies and Research, and a secondary appointment in the Department of Medicine, Vanderbilt University. She mentor numerous medical students conducting community-based research projects in Nigeria, guiding them through the process of developing and



conducting research, building databases, analyzing data and reporting results, and as co-investigator on an NIH funded collaborative project (PI: Clare H. Bunker), she also mentored University of Pittsburgh Medical, MPH and Ph.D. students. She sits on thesis committees and actively supervises students' research in the Masters of Science in Public Health (MSPH) program at Meharry, and is a recipient of the Distinguished Graduate Educator Award. Her diverse publications indicate breath of interest in the field of preventive health, ability to collaborate effectively, and a passion for working with students. Dr. Ukoli is a member of the American Public Health Association, the American Cancer Society, Women Against Prostate Cancer, and USTOO International which is a non-profit prostate cancer support group. She started USTOO chapters at Meharry and Benin-City to empower men to adopt health life-styles and utilize preventive health services including annual physicals and cancer screening. Dr. Ukoli has been invited to present plenary lectures at local community health fairs, national and international conferences, and is the author of more than 60 scientific publications in peer-reviewed internationally acclaimed journals. Her prostate cancer research projects are funded by the Department of Defense, the Centers for Medicare and Medicaid Services, and the National Institute for Health.

## **Shirley A. Rainey, Ph.D.**

### **Co-Principal Investigator**

Dr. Shirley Rainey received her philosophy degree from the University of Tennessee, located in Knoxville Tennessee in 2003; She holds two Master degrees, one is sociology (1987) and another master's degree in Student Personnel Services and Counseling (1988) from Western Kentucky University, Bowling Green, Kentucky. She joined the faculty in the Department of Sociology at Austin Peay State University, Clarksville, Tennessee in July 2003 as an Assistant Professor and worked extremely hard to publish scholarly research in professional sociological peer reviewed journals. Dr. Rainey also worked with student recruitment and retention initiatives of black students as well as serve as advisor to the sociology club and the Mu chapter of Alpha Kappa Delta International Honor Society. She obtained tenure at APSU in 2004. To further her career and research goals, Dr. Rainey joined the faculty in the Department of Sociology and Anthropology at Fisk University, Nashville, Tennessee, and July, 2007. She has continued to publish scholarly works in the field of Environmental Justice in referred sociological journals in her field of study. In February 2009, Dr. Rainey was awarded tenure at Fisk University and promoted to the rank of Associate Professor. She was awarded a United Negro College Fund (UNCF) Mellon Program Fellowship to continue her Environmental Justice/Racism study in McIntosh Alabama in 2008. She is working on publishing this research as well as writing an educational textbook in Environmental Justice.





## **Collaborative Undergraduate Historically Black Colleges and Universities (HBCU) Student Summer Training Program Award**

### **About The Program**

This is one of the programs of the office of the Congressionally Directed Medical Research Programs (CDMRP) that manages Congressional Special Interest Medical Research Programs (CSI) encompassing breast, prostate, and ovarian cancers, neurofibromatosis, military health, and other specified areas. The Prostate Cancer Research Program (PCRP) was established in 1997 to promote innovative research focused on eradicating prostate cancer. The PCRP Collaborative Undergraduate HBCU Student Summer Training Program Award was introduced in 1994 to support the training of the next generation of prostate cancer researchers with emphasis on individuals who may be likely to focus their research on addressing prostate cancer health disparities.

### **Program Goal**

To stimulate the interest of minority undergraduates to consider an academic career in prostate cancer research by providing role models as mentors and sources of encouragement, guidance and support. Program students will be expected to receive hands-on experience within existing research projects developed by mentors, and encouraged to develop individual pilot projects.

### **Training Objectives**

1. Improve knowledge about the epidemiology of prostate cancer, and the existing ethnic disparity in both incidence and mortality statistics.
2. Enhance familiarization with research methods and the ability to critically evaluate scientific literature in the area of prostate cancer.
3. Improve the understanding of the dynamics of developing, maintaining and sustaining communication networks in the African-American community, and undergo Human Subject Protection and Safety training.
4. Improve laboratory and epidemiological methods and skills particularly related to the research projects of program mentors.

### **Program Plan**

This is a collaborative partnership between two institutions with the specific mission and passion to serve the under privileged. Fisk University was established in 1867, a couple of years after the Emancipation Proclamation, to provide comprehensive and quality undergraduate education open to all, regardless of race, and has continued to meet its mission. Conveniently located on the opposite side of Dr. D.B. Todd, Jr. Blvd, Nashville, is Meharry Medical College that has maintained an impressive history of leadership in the education and training of minority physicians, and the provision of health services for minority populations in the United States since 1876. This program is built on the solid foundation of the Meharry-Vanderbilt Alliance since 1999, the NCI Comprehensive Minority Institution/Cancer Center Partnership (U-54) grant since 2000 in partnership with the Vanderbilt-Ingram Cancer Center, and several independently funded investigators at Meharry. The strong mentorship relationships are expected to continue beyond this period, building self-confidence, and preparing these undergraduates towards leadership in academic careers in biomedical research.



**Derrick J. Beech, M.D., F.A.C.S.**  
**Professor and Chairman**  
**Department of Surgery**  
**Meharry Medical College**

A native of Atlanta, Georgia, Dr. Derrick Beech earned his Bachelor's degree from Duke University with a major in Mathematics and received his Doctor of Medicine degree from the Medical College of Virginia in Richmond. During his Surgery residency training at Temple University Hospital and Clinics in Philadelphia, Pennsylvania, Dr. Beech developed a strong interest in cancer surgery and the compassionate care required in the care of cancer patients. As such, he went on to complete his fellowship training in Surgical Oncology at M.D. Anderson Cancer Center in Houston, Texas. He is currently Professor and Chairman of Surgery at Meharry Medical College, and Chief of Surgery at Nashville General Hospital at Meharry.

Dr. Beech has received numerous honors and awards including membership in the Phi Kappa Phi Honor Society, Alpha Omega Alpha Honor Medical Society and Who's Who in Medicine and Healthcare. He is a diplomat of the American Board of Surgery and a Fellow of the American College of Surgeons. He is a member of multiple national scientific organizations including the American College of Surgeons, American Association of Cancer Education and Cancer Research. He is a respected author in the field of surgery with over 170 manuscripts, book chapters, and abstracts. He has delivered over 90 local and national presentations and served as visiting professor at many leading institutions.

Dr. Beech's research has focused on cancer prevention and control, novel gene therapy for cancer and large scale clinical trials with a special emphasis on breast cancer, sarcoma and colorectal cancer. He has coordinated prostate cancer prevention programs in Western and Middle Tennessee and is an active investigator in prostate cancer prevention clinical trials.

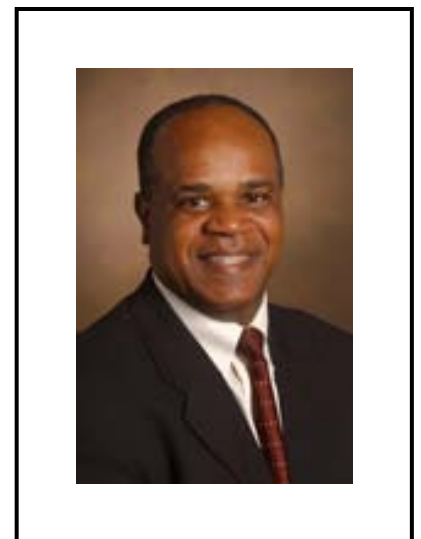
**Rodney Davis, M.D.**

Professor Department of Urologic Surgery at Vanderbilt University  
 Chief of Urology Meharry Medical College.

Dr. Rodney Davis earned his Bachelor's degree from Ouachita Baptist University, Arkadelphia, AR, with a major in biology and received his Medical Degree from Tulane University in New Orleans, Louisiana. He completed his Urology residency training at Madigan Army Medical Center, Tacoma, Washington, and his Fellowship in Urologic Oncology at M.D. Anderson, Houston, Texas. He was Chief of Urology, 4005<sup>th</sup> General hospital in Houston, Texas, served 30 years in the U.S. Army Reserve and retired as a Colonel. He is also Chief of Urology, Tennessee Valley Veterans Health Care System-Nashville

His clinical practice focus is on Minimally-Invasive Urologic Oncology. He has served as the Secretary of the Southern Medical Association, Urology section; and he currently is the Chair of the American Urological Association Hematuria Guidelines Update Committee. He serves as reviewer for the Journal of Urology and Urologic Oncology, and he has been a DOD program reviewer and a grant reviewer. He has been a faculty member of the American Urology Association update course on prostate cancer, and is currently the Chair of the AUA Hematuria Update Committee.

Dr. Davis is Chair of the Tennessee Valley Health Care Robotic Committee and the Developing Robotic Surgery Program. Embracing his passion for the elimination of health disparities he is involved in prostate cancer awareness activities in African-American communities, and in addition to his other research interests he provides urology consultation for the Meharry Medical College Prostate Cancer Research Program, supporting their dietary risk and prostate cancer education studies. He continues to be invited to deliver local and national presentations and has several publications.



# **Prostate Cancer Research Training Program (PCaRT)**

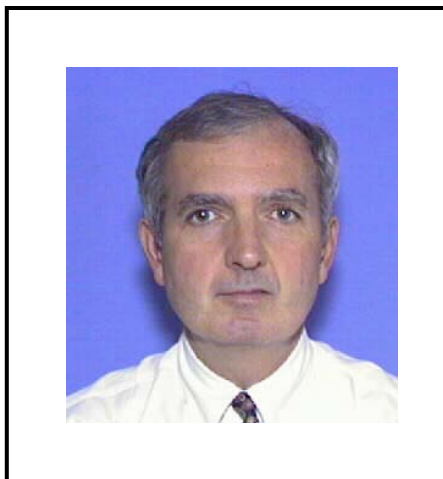
## **Opening Session**

Moderator: Ms. Charlotte Goodin, Undergraduate Fisk University  
Monday, June 1, 2009.

- 8:00am. Registration  
Dr. Shirley Rainey  
Program Co-PI, Fisk University, Nashville.
- 8:15am Orientation  
Flora A. M. Ukoli, M.D., M.P.H.  
Program PI & Mentor, Meharry Medical College.
- 8:45am. Strategies for recruiting African-Americans into biomedical research  
Ms. Michelle Reece  
Coordinator, Nashville Men's Preventive Health Study (PI: Dr. Pamela Hull, TN State University)
- 9:45am. Cancer Biology 1  
Dr. LaMonica Stewart. Program Mentor, Meharry Medical College.
- 10:45am. Break & Arrival of Invited Guests
- 11:00am. Opening Session: Welcome Address  
Derrick J. Beech, M.D., F.A.C.S. Professor & Chair of Surgery, Meharry Medical College
- 11:10am. Introductions: The PCaRT Program, Summer Interns and Mentors  
Flora Ukoli, MD, MPH. (PI) & Shirley Rainey, Ph.D. (Co-PI)
- 11:25am. The Prostate  
Rodney Davis, M.D., Professor Vanderbilt University & Chief of Urology at Meharry.
- 11:40am. Graduate Training and Research at Meharry Medical College  
Maria F. Lima, Ph.D.  
Dean, School of Graduate Studies and Research, Meharry Medical College.
- 12:00nn. Lunch
- 12:45pm. Closing Remarks  
John J. Murray, M.D., Ph.D.  
Associate Vice President for Research

## **PCaRT Program Continues**

- 1:00pm. The translational approach to breast cancer research. Dr. Alecia Malin Fair
- 2:00pm. IRB Training Session  
Cynthia Weaver, MT (ASCP), MSPH.  
Human Protections Administrator
- 5:00pm. PCaRT Program Closing Dr. Flora Ukoli



**John J. Murray, M.D., Ph.D.**  
**Associate Vice President for Research**

Dr. John Murray is Professor of Internal Medicine and Biomedical Sciences at Meharry Medical College and Professor of Medicine and Pharmacology at Vanderbilt Medical School, Nashville, TN. He has held the Elizabeth and John Murray Chair of Medicine at Vanderbilt University School of Medicine, and is attending physician at Vanderbilt University Hospital, the Veterans Administration Hospital, and Nashville General Hospital. After graduation from Harvard College, he received doctoral degrees in Medicine and Pharmacology from Vanderbilt University School of Medicine, where he was a National Institutes of Health (NIH) Doctoral fellow, a Vivian Allen Scholar, and an Exchange Fellow of the National Heart, Lung, and Blood Institute and the Soviet Academy of Sciences at the Myasnikov Research Institute of Cardiology in Moscow, Russia. Dr. Murray completed a residency and chief residency in internal medicine and a research

fellowship in clinical pharmacology at Vanderbilt University School of Medicine. He subsequently completed postdoctoral fellowships in rheumatology/immunology and allergy/immunology/pulmonary medicine at Duke University School of Medicine in Durham, North Carolina where he remained on the faculty until his return to Vanderbilt Medical School and most recently assuming his roles at Meharry Medical College. He is a member of various organizations, including the American College of Physicians, the American Thoracic Society, and the American Academy of Allergy and Immunology.

In addition to being an associate editor for *Lipids*, Dr. Murray serves as an ad hoc reviewer for such journals as the *New England Journal of Medicine*, *Molecular and Cellular Cardiology*, and the *Journal of Immunology*. Dr. Murray is the author of 290 articles and abstracts and serves as an invited lecturer at national and international meetings. He has received various awards and is included in *Who's Who in Medicine and Healthcare* and *Best Doctors in America*. In addition to his active clinical practice, he lectures, participates in research supported by the NIH and private organizations, and has directed numerous clinical trials of novel therapies in a variety of disease conditions as well as respiratory and immunologic diseases focusing on his training in clinical pharmacology.



**Maria F. Lima, Ph.D.**  
**Dean School of Graduate Studies and Research**

Dr. Maria Lima, Professor of Parasitology and Public Health, obtained her Ph.D. degree in Microbiology and Public Health at Michigan State University, and continued her post-doctoral education in the area of Molecular Parasitology at Meharry medical College. Her research is in tropical diseases; specifically in the area of host-parasite relationships, studying growth factor regulation of trypanosome proliferation. Dr. Lima has authored many peer-reviewed manuscripts, and received continuing funding from the National Institutes of Health and the National Science Foundation to support her research and enhance graduate training at Meharry. Under her leadership in the past eight years, the School of Graduate Studies at Meharry has graduated the highest number of African-American Biomedical Science Ph.D. students in the United States. Dr. Lima is intimately involved in minority student outreach at the high school and college levels, with the goal to increase the number of underrepresented students pursuing a career in biomedical research. She serves as consultant and

advisor to the National Institutes of Health, was chair of the Minority Access Research Careers Study Session (MARC) at the National Institute of General Medical Sciences, a member of the Genome Research Study Section, National Human Genome Research Institute, and serves on numerous other national committees.

As recipient of the Outstanding Teacher of the Year Award at Meharry Medical College in addition to numerous teaching awards, Dr. Lima has touched many of the students' lives as they matriculate through the institution and nationally. Dr. Lima teaches in all Schools and Programs at Meharry. She is a student advocate and her door is always open to listen to students concerns. In this capacity, her interaction with students is a source of great joy for her.

**LaMonica V. Stewart, Ph.D.**  
MENTOR



Dr. LaMonica Stewart is an Assistant Professor in the Department of Cancer Biology at Meharry Medical College and a member of the Vanderbilt Ingram Cancer Center. She completed her doctoral training in the Department of Pharmacology and Toxicology at the University of Texas Medical Branch (UTMB). Dr. Stewart also performed postdoctoral studies in the Laboratory of Cell Regulation and Carcinogenesis, NCI and the Department of Molecular and Cellular Biology at Baylor College of Medicine. Since 2004 she has been a faculty member at Meharry Medical College. She has experience in *in vitro* and *in vivo* studies of nuclear receptor function in prostate epithelial cells and assays designed to examine regulation of gene/protein expression and cell proliferation. She has published twelve peer reviewed papers, eleven of which are in the area of prostate cancer. In order to reduce the number of deaths and

public health burden associated with prostate cancer, we must identify therapies that effectively decrease the spread of both early and late-stage prostate cancer. Compounds that activate the peroxisome proliferator activated receptor gamma (PPAR $\gamma$ ) have been shown to reduce growth of cultured human prostate cancer cells *in vitro* as well as prostate tumors in mouse models of prostate cancer. However, little is known about the mechanisms that underlie PPAR $\gamma$  ligand-induced growth inhibition, making it difficult to identify patients that would benefit from therapies involving PPAR $\gamma$  ligands. The research goal of my laboratory is to further define the pathways by which PPAR $\gamma$  ligands reduce human prostate tumor growth and progression. We are currently using human prostate cancer cell lines and athymic mouse xenograft models to define the signaling pathways that mediate PPAR $\gamma$  ligand-induced alterations in prostate cancer gene expression and cell proliferation. In addition, we are conducting studies to determine whether PPAR $\gamma$  ligands decrease cancer cell invasion and other processes required for the formation of prostate cancer metastases.

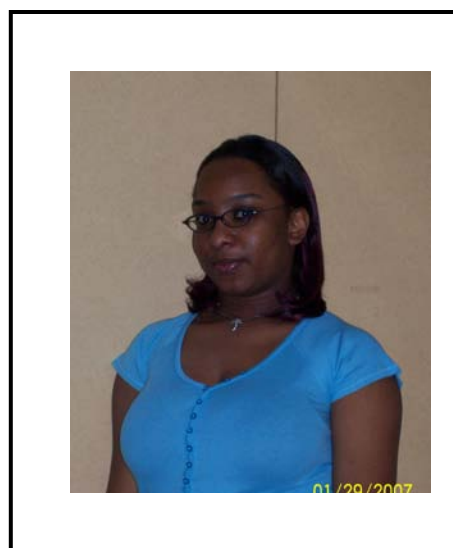
**Danielle Jones**

Fisk University Undergraduate

My Never Ending Thirst to Succeed.

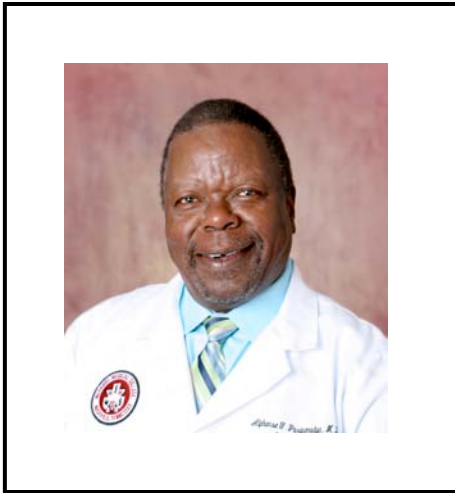
As a child, I had always been fascinated by the unpredictable world of science and medicine, and even today at the age of twenty, I am even more fascinated by this remarkable world. It is my dream to become a pediatric neonatologist because of my love for children and also to obtain my PhD so I'll be able to do cancer research. Science and medicine are my passion and even though I have stumbled many times, my parents who are not wealthy people, have instilled within me principles of determination, the pursuit of success and the need to value a good education. Two years ago one of my grandmothers died from breast cancer after living with it for eight years. I went to visit her very often and she was in so much pain that I would cry. I remember her telling me that she didn't want me to see when she would die so I should go; that hurt me so much to the point where I was upset with her but I knew she had a good reason for requesting that of me. It was due to the death of my grandmother that spiked my sudden interest in cancer research. I am passionate about lessening the amount of people that die from cancer each year and also to lessen the pain felt by many as I know first hand what it feels like to lose someone you love dearly. I am a very determined and hard working individual. I

always achieve what I set my mind to because I am a fighter, I never quit and I never let one bad experience keep me from going after what I want. If I am selected, I will offer a unique combination of integrity, intelligence, good judgment and punctuality. I am very responsible and my warm personality makes it easy for me to get along with just about anybody. I am a quick and easy learner and my self discipline will make any task surmountable. Participating in this program would teach me research skills that would be beneficial to me in the near future. Like my mother, my grandmother, Mitchell Obama, and Beyonce Knowles, one of my goals is to be a successful black woman influencing and touching the lives of all those I come in contact with daily.





**Alphonse Pasipanodya, M.D.**  
**MENTOR**



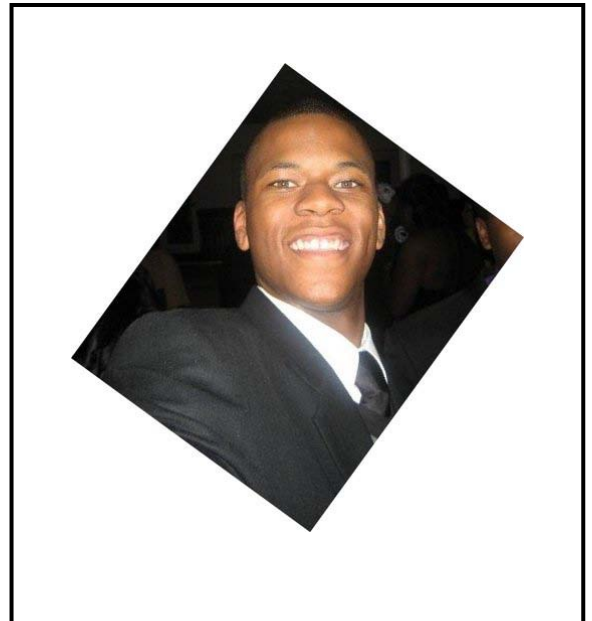
Dr. Alphonse Pasipanodya is an accomplished and experienced surgeon and faculty member of the Department of Surgery at Meharry. He sustains a vibrant clinical practice, teaches and mentors medical and MSPH students, and provides medical care at the Matthew Walker Comprehensive Health Center where the Meharry Prostate Cancer Education Program is based, volunteering time to offer free prostate cancer counseling and screening for study participants. He also provides the necessary medical consultation for the newly inaugurated UsTOO Meharry Chapter, a prostate cancer education and support group. He serves as a role model of a physician combining clinical work with community-based research. Dr. Pasipanodya is an Alumni of Meharry Medical College.

**Curtis Fields**

Fisk University Undergraduate

My stay here at Fisk has taught me a great many things about history, performance and many other topics. As a Jubilee Singer, I served as an ambassador to other institutions, and nations, for the school. The experiences I've had here seem to be a lesson in the life of a productive African American. And, one of the values that I will always hold dear and respect is the lesson that this institution has taught me about education and its applications. The fundamental act of learning is one of the most important actions in which we can partake as human beings. That is why one of my most valued activities is actively sharing knowledge with my peers, elders and juniors. Communicating ideas and expressing opinions is the only way that change can occur in society. Therefore, the role of research in a society is special. In research lies the key to effective decision making, which is the goal of all society. What type of world would we live in without the contributions of research and diligent study helping us to form concepts clearly enough to decipher a truly intelligent path? In my personal future, I desire to become the link between the researcher and the student: the teacher, my mother and grandmother both entering this creed before me. As an active student, I believe that it is important that the student be involved in teaching others. If not teaching in the interest of spreading knowledge, teaching in the interest of better understanding the subject matter. For, what teacher can teach without first having a grasp of the information themselves? It is therefore the goal of learning, to master concepts to the level of applying them to other areas foreign to their doctrine of study. For example, an electrical technician could apply an understanding of the physical representation of a circuit in the Circulatory system of the human body to his latest design.

One of the tools that I see as very important in the future of communication, and therefore learning, is the internet. Information posted on the Web has an almost alarming rate of transfer on a global level. Proper implementation of this tool for the good of humanity as a whole, is dependent on an understanding of the people who must receive the information. I say this to make the point that all information is relative to any student. The principles of proper research can be applied to any major division of education. I apply to this program, not as a Computer Science student. But, simply as a student.







**Carlton Adams Jr., M.D.**  
MENTOR

Dr. Carlton Adams is associate professor of surgery and chair of the Division of Clinical Skills & Competency. He has carefully balanced his role as a clinician, mentor, and educator while contributing significantly to the development of his medical students. His busy clinical practice in the specialties of Peripheral Vascular Surgery and General Surgery are vital contributions to the underserved communities in Davidson County and Meharry Medical College. He was recently featured on the front page of the Nashville Pride, a local newspaper that serves the minority community, where they honored him as a model physician during the celebrations for Black history month. He serves as a role model and secondary mentor for all the trainees such that they see first hand the blending of a career that straddles both clinical and scientific interests.

**Liana Geddes**

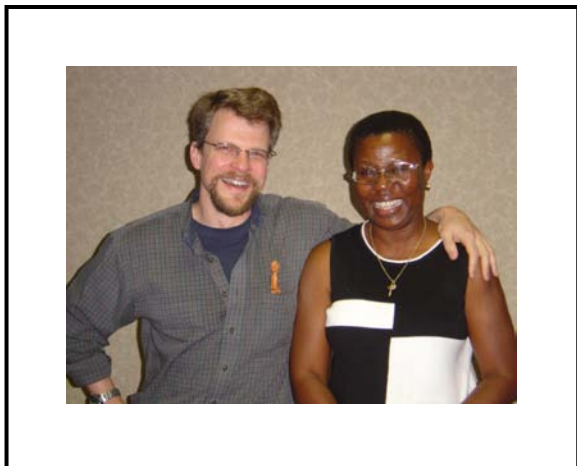
Fisk University Undergraduate

Prior to attending Fisk University, I undoubtedly knew that a career in Pharmacy was my chosen path. However, that abruptly changed when I arrived and began to focus more on my classes and occupations that would be more professionally rewarding to me. Since beginning my college journey, I have realized that my ultimate professional goal is to be in a health-care related field. Through much searching I have learned that my particular interest is in weight control and how it is linked to nutrition, metabolism and physical activity. I am planning to attend graduate school and receive a Masters Degree in Nutrition or Public Health. After completing this course of study, I may continue my educational endeavors by enrolling in a PhD program or Medical School. My short term goal is to work in Public Health, focusing on the health issues of under represented populations. One of my specific goals is to develop programs for youth and those in under served communities. These programs will provide education on how to live healthy lives, focusing specifically on reducing obesity in children. In order to improve and reduce health disparities I must first address the negative health influences that affect our youth daily, because the future of our society is contingent upon the children of today. Providing an opportunity for younger people and minorities to be informed and learn about proper nutrition and lifestyles will provide them an opportunity to improve their health and overall way of life. Beyond interest in my classes, my personal experiences have influenced my career choice as well. Many individuals in my family suffer from diabetes, obesity and a few have cardiovascular disorders. I want to have a career that allows me to share information that will help to promote a healthier lifestyle and hopefully decrease the number of people suffering from various health disparities.

The PCaRT Summer Research Program will provide the process through which I am able to become more informed with a specific health disparity, Prostate Cancer. I expect that education related to its causes, possible links to other health issues and how it may be prevented will all be studied. Further, the research may provide insight into why African American men are more susceptible to this form of cancer than other ethnicities. I look forward to being involved and the knowledge I will gain as a result of the internship.



**Jay H. Fowke, Ph.D., MPH.**  
MENTOR



**Dr. Jay Fowke** is an epidemiologist holding the position of Assistant Professor of Medicine at Vanderbilt University. He has received funding as PI for prostate cancer research from the NCI, American Institute of Cancer Research, Department of Defense, and the Prostate Cancer Foundation, and has published in leading journals on the relationships between race, obesity, and prostate cancer detection. He is currently conducting research investigating racial differences in prostate cancer detection. Dr. Fowke developed the Nashville Men's Health Study to permit investigation of prostate cancer molecular biomarkers while controlling for prostate cancer screening and detection practices, and conducted case-control and retrospective cohort investigations of the association between genetic polymorphisms in P-450 enzymes and PPAR- $\gamma$ 2 agonists (i.e., thiazolidinediones) with prostate cancer or

prostatic intraepithelial neoplasia. Dr. Fowke is co-investigator on the Meharry Prostate Cancer Research Program and he also serves as a consultant on this program.

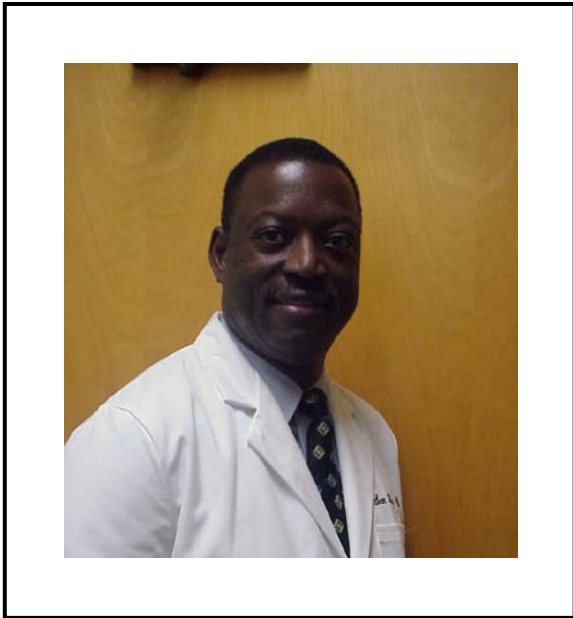
**Charlette Goodin**

Fisk University Undergraduate

My journey to Fisk University, Nashville, Tennessee, resulted from my lifelong dream to actually be engaged in a career where I am able to make meaningful contribution in the lives of others or to effect changes in order to improve the way of life for individuals. This came about as I observed my mother, an educator, relentlessly and tirelessly, yet compassionately and lovingly, give of her time and care to children and their parents alike. For over thirty years, she has taught and is still teaching children from ages 3 to 6 years old, and I am amazed at how much she has impacted their lives. Also, my father who worked in production would come home many evenings with tired, sore feet and needed foot and neck massages. I was always happy to oblige and to see the satisfaction it brought him. Over the years I was involved in teaching Sunday School and Summer School; many of the children who sat the Common Entrance Examinations (for entry to High School) were successful. I also worked with youths in my church and was the youth leader, choir leader, and sat on several committees. I have always enjoyed working with people and making a difference in their lives. It is with this in mind that I am pursuing both the Bachelor of Science degree in Nursing and the Bachelor of Arts degree in Sociology at Fisk University as I am cognizant of the fact that formal education and training is extremely important and essential in fulfilling my dream. The opportunity to be involved in Prostate Cancer Research is one such way to gain the experience needed in an area that I could learn so much in and be able to contribute in a meaningful way to science and society.



If given the opportunity to work with the team of professionals involved in the Prostate Cancer Research Program, I will be able to acquire the necessary skills needed to begin my journey into the field of Nursing. The experience I will gain will also give me the necessary tools needed to grow both personally and professionally in my chosen field. I look forward to your kind consideration of my application to serve with your team.



**Olugbemiga Ben Ogunkua, M.D., Ph.D.**  
**MENTOR**

Dr. Ogunkua earned his M.D. from the University of Ibadan. He received his Ph.D. at Temple University, Philadelphia, PA. He was an adjunct professor in University of Pennsylvania, an adjunct Professor in Drexel University and also an adjunct Professor at Arcadia University, Glenside, Pennsylvania. He is currently an Associate Professor in the Department of Professional Education at Meharry Medical College and also an Associate Professor in Department of Cancer Biology. His laboratory interest is in cancer with emphasis of prostate cancer. He has developed a research program to study prostate cancer progression in a mouse model in collaboration with his mentor at Vanderbilt University, Robert Matusik, Ph.D. This transgenic mouse model is a novel method that mimics the carcinogenic process observed in humans, and can therefore be used to study the effect of environmental toxicants on prostate carcinogenesis. He is also working with novel cell lines that can unlock the intricacy of some of the molecular pathways of prostate cancer progression and metastasis. Among his

present work is the impact of Benzo(a)pyrene [B(a)P], a lipophilic aromatic hydrocarbon present in environmental waste and in some foods, on prostate cancer initiation and progression. B(a)P has been implicated in toxicity and in increased incidence of cancer in various organs. To test whether B(a)P alters the rate or extent of cancer development, his laboratory is exploiting genetically engineered mice models that permit the study of prostate carcinogenesis in an experimentally amenable time frame to advance the knowledge about the role of environmental toxicants.

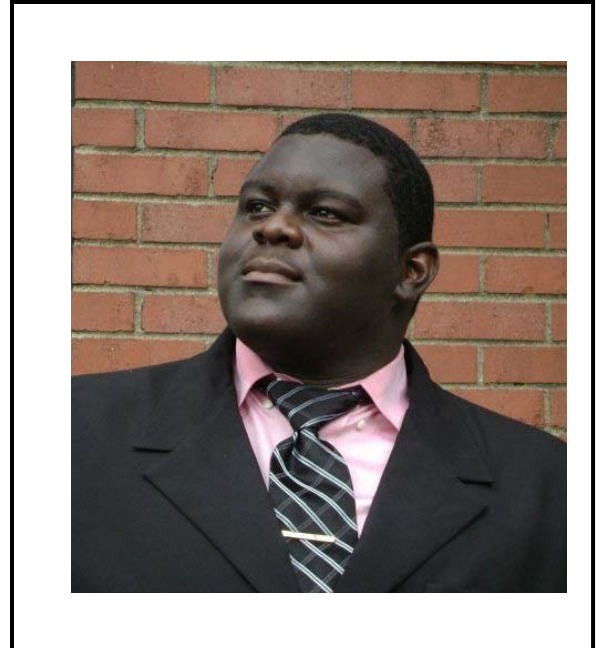
**Robertino Simpson**

Fisk University Undergraduate.

“It is when you give of yourself that you truly give”

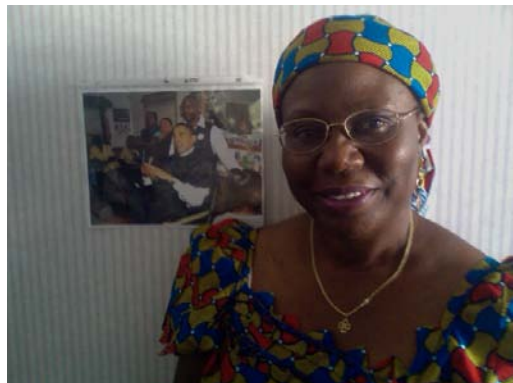
Growing up in northern Jamaica my family instilled in me a love for life and a compassion for others. I therefore deem it my earthly purpose to be of service to mankind and more so to help the disadvantaged. I was advised never to let my situations define me, so I battled successfully through preparatory and high school, knowing that education was the only way, especially for the disadvantaged. I aspire to be a Physician Scientist, and I find it quite refreshing to know that change is the only constant you can depend on. I most sincerely know that I deserve this opportunity, not to say that others have not paved similar paths, but I feel that I have not only walked the road but I have learnt the lessons, gained experience in life, and fostered a great love and determination in wanting to do more for others. My compassion and enduring spirit has led me on because I recognize that “easy roads were not trodden by great men.” If I want to be good at what I will be doing I expect challenges, I expect some set

backs, and I even expect to want to give up at times, but I am confident that I will gain the victory at the end, because this is my destiny. “Show me your friends and I tell you who you are.” I have always surrounded my self with positive people and we motivate each other to keep on pursuing our dreams. This is successful thinking and I believe that a constant emersion in encouragement will assist me in overcoming most of the deterring struggles along the way towards my dreams. I will benefit greatly from this research training program and gain valuable interactions with successful people in the field of medical research. I may be looking from the vantage point below the M.D., Ph.D. but one day I will see beyond these horizons and dream even bigger.





**Flora A. M. Ukoli, MD, MPH.**  
**MENTOR**



Dr. Flora Ukoli is professor in the Department of Surgery with over twenty years research experience in preventive medicine with a focus on primary health care utilization and epidemiology. She now directs community-based prostate cancer education, screening and research programs at Meharry. Her first research focus is to identify dietary risk and protective factors of prostate cancer in African-Americans and Nigerians. This theme will be expanded to investigate gene-nutrient risk associations in populations of African ancestry to include Jamaicans. One of her studies is investigating the role of over thirty dietary fatty acids in prostate cancer risk, while the other study

is looking at the protective effect of lycopene, an antioxidant found in tomatoes. Prostate carcinogenesis involves complex interactions of several environmental, hormonal and genetic predispositions, presenting numerous opportunities for student pilot projects that will focus on the role of selected vitamins and/or antioxidants in the target population. The second area of research is developing and evaluating the effectiveness of prostate cancer education intervention programs specifically for African-Americans and minorities, with particular attention to low-income medically underserved populations. Mentees in her program will be fully involved in community outreach, developing strong community networks based on mutual respect and trust. By spreading awareness and unbiased information about prostate cancer, and by emphasizing the regulation and safety of biomedical research program interns will gain the trust of the people and this will positively impact the number of African-American participants in epidemiological research as well as in clinical trials.

**Marico Cheeks**

Fisk University Undergraduate

My name is Marico Cheeks and I was born and raised in Memphis, Tennessee. I am currently a sophomore biology major at the historical Fisk University. My first interest in health science dates back to when I was in high school, and I took Biology for the first time. The information that I gained from that class, along with knowledge I have gained from other science courses over the years, has drastically stimulated my interest and passion for health science throughout my high school and college career.

My long term professional career goal is to become an anesthesiologist. I plan to accomplish this by graduating from Fisk University in May of 2011 with my Bachelor's Degree and at least a 3.5 GPA. After that, I plan to apply and attend medical school at the medical school that I am privileged enough to attend. After studying and practicing at medical school from 4 to 6 years, I plan to enter an anesthesiologist residency at a hospital that I am allowed to practice within. After becoming a certified anesthesiologist by the American Board of Anesthesiology or other certification organizations, I plan to work as an anesthesiologist in a hospital. After becoming an anesthesiologist, I plan to pursue a career in research of diseases and their treatments or cures. I also plan to travel to other areas of the world such as Africa and South America to help other cultures in need of medical assistance.



**Prostate Cancer Summer Research Training in Health Disparities**  
**Collaborative Undergraduate Historically Black Colleges and Universities (HBCU) Program**

Meharry Medical College & Fisk University

**PCaRT Short Cancer Course**

Day	8:00 – 10:00 am	10:00 – 12 noon		12 nn – 1 pm	1 :00 – 2:00 pm	2:00 – 5:00 pm
Monday June 1	Community Outreach <a href="#">Ms. M. Reece</a>	Cancer Biology I <a href="#">Dr. L. Stewart</a>	Opening Session <a href="#">Dr. Derrick Beech</a> Chair Surgery Department		Breast Cancer Research <a href="#">Dr. Alecia Malin Fair</a>	IRB Training <a href="#">Ms. Cynthia Weaver</a>
Tuesday June 2	Research Ethics <a href="#">Dr. Carol Freund</a>	Bio, Chem. & Rad. Safety <a href="#">D. Powell &amp; L. Ganster</a>		L  U  N  C  H	Epidemiology of Prostate Cancer. <a href="#">Dr. J. Fowke</a>	Cancer Biology I <a href="#">Dr. L. Stewart</a> Project: Dr. L. Stewart Cell Study
Wednesday June 3	Project: Dr. O. Ogunkua Animal Model	Diabetes/Obesity Research <a href="#">Dr. S. Miller-Hughes</a> Epidemiology: Data Collection <a href="#">Dr. Flora Ukoli</a>			Biostatistics: Introduction <a href="#">Mr. Tan Ding</a>	Cancer Epidemiology <a href="#">Dr. A. Pasipanodya</a> Project: Dr. A. Pasipanodya Prostate Cancer Education
Thursday June 4	Digital Library <a href="#">Mr. R. Dryden</a>	Project: Dr. Fowke /Ukoli Case-Control Study			Cancer Biology 2 Genes and Cancer <a href="#">Dr. O. Ogunkua</a>	Project: Dr. F. Ukoli Vitamin E & Prostate Cancer
Friday June 5	Genomics <a href="#">Dr. S. Pratap</a> Director	Health Disparity and CBPR <a href="#">Dr. M. Hargreaves</a>			Diagnosis and Management of Cancer: General Principles <a href="#">Dr. C. Adams</a>	
Saturday June 6	Community Outreach: Community Health Fair  ALL STUDENTS					
Sunday June 7	Community Outreach: Schrader Lane Christ Church  ALL STUDENTS				Community Outreach  ALL STUDENTS	

Additional Workshops and Seminars: (12:00 – 1:00pm during weeks 2-9): Guest Speakers to be announced.

*“The time is always right to do what is right”*

Martin Luther King, Jr.



Collaborative Undergraduate Historically Black Colleges and Universities (HBCU)  
Student Summer Research Training Program Award

Funded by the Department of Defense Prostate Cancer Research Program (PCRP)



## INTRODUCTION

Within the African-American community there is a negative perception of healthcare which may be reflected in their low screening participation. In addition to negative healthcare perceptions, studies suggest that amongst other things, lack of knowledge and transportation, relationships with primary healthcare providers and financial cost also contribute to the lack of participation amongst African-Americans. Prostate Cancer Screenings also exhibit a lack of participation amongst African-American men.

According to studies African-American men are disproportionately affected by prostate cancer. National studies have found that black men, compared with their white counterparts, have a 34 percent greater chance of being diagnosed with the disease and a 123 percent greater chance of dying from it. Despite their higher incidence and mortality rates of prostate cancer compared to their white counterparts, their participation in prostate cancer screening activities is lower. The barriers contributing to low screening rates amongst low-income African-American men in Nashville need to be identified so that an appropriate prostate cancer education intervention program can be developed to address the barriers. With the identification of a cross-section of barriers and formation of an educational program that promotes informed decision making, African American men may be able to overcome their reluctance to undergo cancer screenings involving PSA and the rectum therefore increasing the survival rate of black patients.

## AIMS AND OBJECTIVES

Identify the prostate cancer screening hindrances and develop a culturally appropriate prostate cancer screening intervention program for low-income African-American men in Nashville, TN. This program will improve their level of knowledge about prostate cancer and positively change their attitude towards early detection of prostate cancer by PSA and DRE screening.

1. Convene three distinct focus groups to identify and catalog perceived barriers to prostate cancer screening among low-income African-American men.
  - a. These groups will be formed to address both individual and interpersonal perspectives
  - b. According to the group either individual or interpersonal perspectives will be addressed/discussed
2. Assemble a Community Advisory Board (CAB) for the development of a culturally appropriate prostate cancer education and intervention program with respect to the addressed barriers.
3. Improve the ability of the target population to make informed decisions about prostate cancer screening.

## MATERIALS AND METHODS

African-American men and women 25 years and older were invited from the Nashville Community to participate in prostate cancer focus group discussions. Eligible individuals were informed through focus group flyers that described the purpose of the study, eligibility criteria, incentive, and project coordinator contact information. Flyers were posted at the health center, churches, stores, barbershops, community business and recreation centers. Prostate cancer survivors were contacted through local cancer support groups, cancer registry, and word of mouth. The project coordinator screened interested persons for eligibility and assigned them to an appropriate focus group.

Three focus groups, each consisting of ten persons, were conducted to obtain information about barriers to prostate cancer screening among self-identified African-Americans. Barriers and facilitators of prostate cancer screening will be assessed at the individual level, focus groups 1 and 2, and at the interpersonal level, focus group 3. The first group consisted of men who were at least 40 years and older and regularly screen for prostate cancer by PSA and/or DRE. Five men were diagnosed with prostate cancer and the other five were prostate cancer survivors. The second group consisted of men at least 35 years old who had never screened for prostate cancer by DRE and/or PSA. Four men were younger than 40 and six men were 40 and older. Group members for the third group were family members, wives/partners and children of African-American men who were between the ages of 25-39. Four wives/partners (30 years and older), three daughter and three sons (25-39 years of age) comprised the third group. This group assisted in indicating family members' relevant perceptions to prostate cancer screening decision making.

To minimize the cultural and gender related sensitivities an African-American man was trained as a community navigator. He conducted all focus groups at the health center conference room and a list of "probing questions" was used to facilitate discussions. He also served a modest meal and distributed \$20 cash compensation towards the cost of transportation at the completion of the 2-hour session.

## MATERIALS AND METHODS cont.

All participants were consented prior to participation, including an agreement (or refusal) to be video and audio taped during the sessions. All focus group participants were addressed by name, identification numbers were not assigned to them. The information collected was analyzed by a professional transcriber using the Atlas.ti software, with themes developed and organized by one of the study investigators (Patel, K.).

After all of the focus group meetings were conducted, 10 participants were selected to serve on a Community Advisory Board (CAB) to assist in the development of an intervention for improving knowledge, informed decision making, and screening rates for prostate cancer. The CAB consisted of seven laymen (five men, two of which were prostate cancer survivors and two women), two community leaders and one health care provider. Persons were selected based on the degree of active involvement in discussions and interest in participating; to ensure that each of the three levels of the socio-ecological model was represented 2-3 persons were selected from each focus group. Three CAB sessions were held, first the barriers indentified by the focus groups were studied, then solutions were proposed to the barriers, and lastly content materials for an educational intervention, brochure and study advertisement flyers were developed. CAB members were consented prior to their participation, served a modest meal, and received a \$20 cash incentive for each of the three sessions moderated by the community navigator and one study investigator (Patel), with the PI in attendance only.



## DATA ANALYSIS

## RESULTS

## CONCLUSION

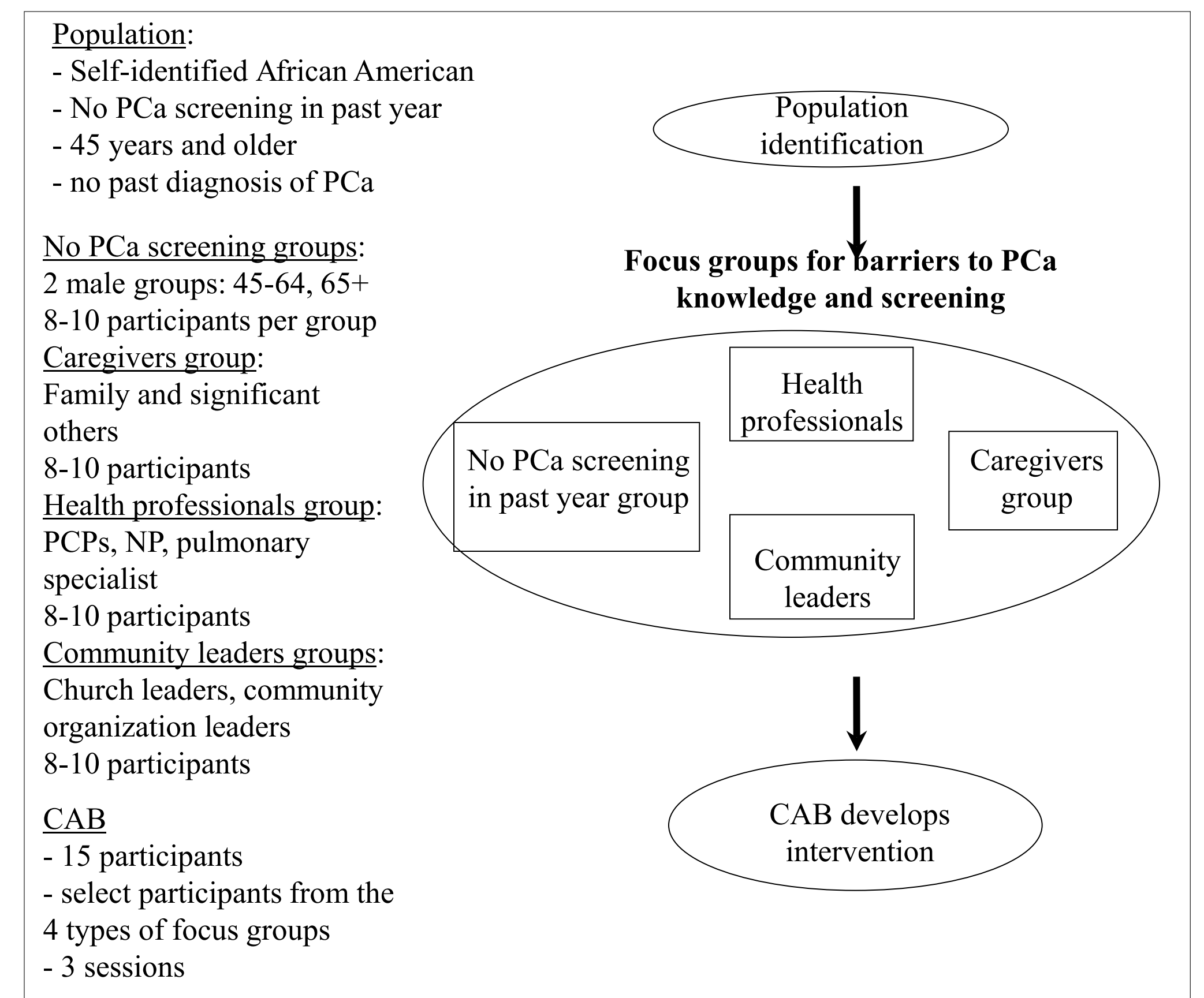
- Information from the focus groups was used to develop content for the education intervention brochure aimed at increasing prostate cancer knowledge and encouraging prostate cancer screening.
- The CAB will generate a culturally relevant, easy to read and understand, and interactive intervention that will encourage participants to ask questions.

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## ACKNOWLEDGEMENT

- African-American prostate cancer screening program and study participants
- Department of Surgery Meharry Medical College
  - Dr. Flora Ukoli
- PCaRT 2009 Summer Research Training Program
- Mathew Walker Comprehensive Health Center
- Research Navigators





## INTRODUCTION

Many of us at one time or another have been told by our parents if not by others that proper nutrition is important in staving off sickness and disease. This we are told can be achieved by eating a balance meal with plenty fruits and vegetables. But how important are fruits and vegetables in promoting good health? What nutrients are important to the human body? This paper will focus on the antioxidant, lycopene, and its impact, if any, on prostate cancer risk in African American men.

By age 65, men in the United States develop prostate cancer and by age 50 the more aggressive form of the disease is found in African American men. Prostate cancer is a problem in African-American men as they do not consume foods that contain sufficient quantities of lycopene. Some studies have indicated that the mortality rates in African-American men are much higher than other men of ethnic origins and one contributing factor that greatly influences this is the lack of a high level of lycopene found in the blood. Laboratory studies revealed that lycopene is one of the many natural carotenoids that is a very potent antioxidant that inhibits the abnormal growth of prostate cancer cells. It is found in extremely high concentrations in tomatoes and tomato products and other foods such as fresh guava, raw pink grapefruit, fresh watermelon, fresh papaya, and apricot. The aim of this research will be to examine plasma level lycopene and its association with prostate cancer risk in African American men of age 45 years and older.

## AIMS AND OBJECTIVES

The goal of this study is to evaluate the role of lycopene in prostate cancer risk among African-American men in a case-control design.

**Aim 1:** Accrue 50 African-American prostate cancer cases, 50 hospital-based age-comparable controls, and 50 community-based age-comparable controls living in Nashville, TN and in surrounding counties, and compare the demographics, anthropometric measurements, and dietary intake estimates of lycopene and total calories of cases and controls.

**Aim 2:** Compare the role of plasma lycopene in prostate cancer risk among African-Americans, controlling for anthropometric measures of body fat.

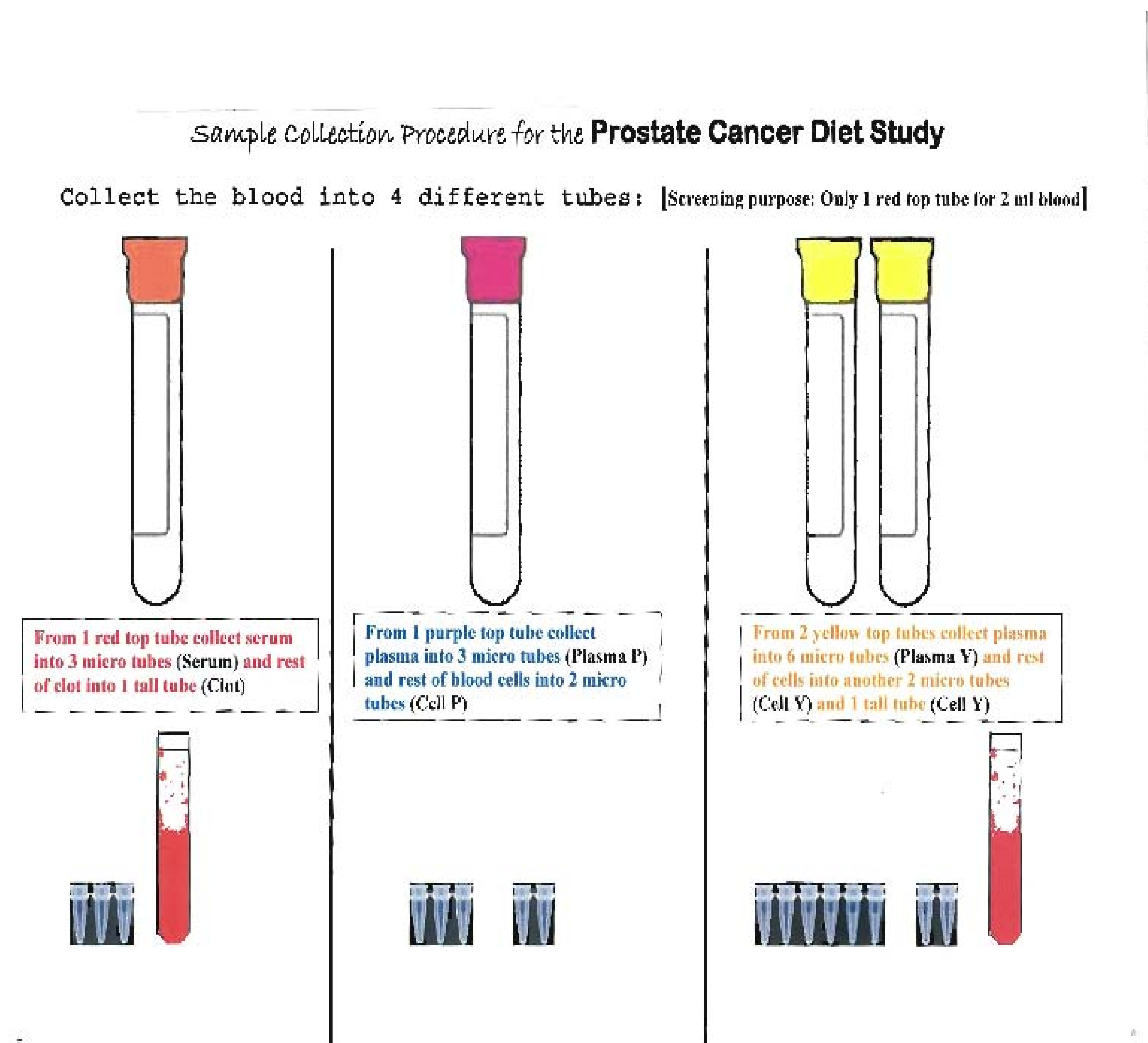
### Hypothesis:

H1: Prostate cancer cases have lower plasma lycopene level than controls in both populations.

H2: Consumption of high quantities of tomato-based foods corresponds to higher plasma lycopene.

H3: Plasma lycopene remains a protective factor for prostate cancer after controlling for total calorie intake and body fat measurements.

**Fig.1 Tubes used in storing venous blood specimen**



## MATERIALS AND METHODS

African-American men age 40 years and older and who reside in Nashville and it surrounding counties were recruited as participants for this population-based case-control study. Cases were identified as African-American men who have been diagnosed with prostate cancer within the past 5 years and the controls were those who declared to be free of prostate cancer within the past 12 months. Two age-comparable controls were selected for each case, one from the community as the case and the other from the same hospital/clinic. The study cases included men who were diagnosed with prostate cancer and the controls included men who have been screened by DRE and PSA and found to be free of prostate cancer. Men who were diagnosed with cancer for more than five years; patients on chemotherapy or hormonal treatment for cancer therapy, other hormones such as insulin, steroids, and anti-retroviral medication; severely ill or institutionalized; patients on prescribed diet modification as part of treatment management for any medical condition. (Except low-salt diet.); and men diagnosed with any other cancer apart from non-melanoma skin cancer were excluded from the study. For the controls, we excluded those who have been diagnosed with prostate cancer at any time; severely ill or institutionalized; patients on prescribed diet modification as part of treatment management for any medical condition; diagnosed with any other cancer apart from non-melanoma skin cancer; and those who currently resided outside TN. We excluded institutionalized persons as their diet may have been different from their usual diet before they became institutionalized. The hypothesis of this study assumed that dietary patterns have not been changed drastically in recent year. Also excluded were men on selected treatments as the hormonal milieu may have been modified drugs such as hormones, anti-retrovirals, and chemotherapy.

Participants were informed about the study including the procedures, benefits, risks, and confidentiality issues. They were informed that participation was voluntary and about their right to withdraw from the study or refuse to participate in the study at any time. In addition, they were informed that the data collected would be used exclusively for this research. Participants were also informed about prostate cancer diagnosis, pathology, PSA measures and that treatment would only be abstracted from their medical records if they give the permission for that to be done. All participants were asked to read and sign a HIPAA form that shows how their information would be protected and the list of persons with whom we may share this information with if the need arises.

Data collected were done in two parts. For the first part of data collection, processed participants completed a self-administered questionnaire which involved collecting personal and medical information, including prostate biopsy information. Participants also completed a dietary assessment in the form of food frequency questionnaire (FFQ) that includes life-size food portion models to compare annual frequency and serving size consumption of selected food items like red meat, dairy product, tomato-based foods, fruits and vegetables across cases and controls. Their physical measurements such as height, weight, body-fat percent, waist, hip, mid-arm circumference, biceps, triceps and subscapular skin folds were also measured and recorded. The second part of data collection involved specimen collection of fasting venous blood, 30ml. This was only once with a multi-draw needle, into three separate tubes to provide serum and plasma to measure lycopene.

## DATA ANALYSIS

## RESULTS

## CONCLUSION

## REFERENCES

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